

Inside Dope

By George F. Taubeneck

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Wonderful Woman

During the last several years Helen Peffer, as acting secretary of the American Society of Refrigerating Engineers, has endeared herself to the entire industry.

None of us will ever appreciate fully how much she contributed to the industry by her exercise of good judgment, exceptional tact, faultless understanding, and indefatigable helpfulness.

Back to the University of Illinois she is going—to a wonderful job and a challenging task. She will undertake to teach business journalism, which has long been neglected in our colleges and secondary schools.

Today business journalists have to be trained from scratch. The journalism schools point their pupils only to metropolitan daily newspapers, country weeklies, and the dubious profession of free-lance writing.

Yet sound business journalism is the most useful—and the most exacting—branch of the profession.

By an odd coincidence, Helen Peffer was an instructor at the University of Illinois when the writer and Phil Redeker were students there. It was with great joy that we found her in charge of things at A.S.R.E. headquarters after we joined AIR CONDITIONING & REFRIGERATION NEWS.

God bless you, Helen Peffer!

This column will undertake to keep your thousands of friends informed on your progress and well-being.

Real Money, Today

Since Germany was finally beaten into dust, our foreign visitors have multiplied to the point where we now see at least two a week.

Their observations on export possibilities will guide the direction of future articles in the NEWS at the proper time.

But one observation upon which they all agree seems appropriate to include in this catch-all column here and now. It has to do with money.

War can be financed only by inflation—or unpayable external debt (Britain), semi-permanent internal debt (United States), or paper money (China).

Today nearly every currency but the U. S. dollar has little intrinsic value.

The gold standard has disappeared entirely, outside the environs of North America. In its place has arisen the "cigarette standard." Believe it or not, anywhere else in the world but here, American cigarettes pass for cash.

They have, inherently, all the elements of "sound money" today—they can't be counterfeited, the demand can't be supplied, and they are self-consuming (which latter observation means that they are retired automatically). Sir Walter Raleigh, if he knows all about this wherever he is, should buckle on an extra set of golden wings, or fiery horns.

What a crazy world!

Time to Laugh Again

Last week this column retailed a few choice anecdotes.

None were so funny, however, as the engineering memorandum which came to our desk (via second carbon

To Manage Alco



JOHN E. DUBE

Four Alco Men To Take Key Posts

ST. LOUIS—Four veteran employees of Alco Valve Co., designers and manufacturers of automatic refrigerant control devices, have been promoted to key positions by Russell Maguire, president of the company.

John E. Dube, a vice president, has also been appointed general manager; Charles B. Lockwood, also a vice president, assistant general manager; Roger P. Kipp, sales manager; and Franklin M. MacDougall, chief engineer.

Mr. Dube, active in the automatic control industry for the last 12 years, joined the Alco organization in 1938 and soon after became head of the

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Henry Valve Reveals New Executive Setup

CHICAGO—Realignment of the executive setup of the Henry Valve Co., manufacturer of flow control devices for the refrigeration industry, has been completed through the addition of experienced executive personnel, Guy J. Henry, president and chairman of the board, announces.

Charles V. Gary, former sales manager recently released to inactive duty in the U. S. Naval Reserve after three years of active duty, has been appointed executive vice president and general manager.

Richard S. Dawson will be vice president in charge of sales. Mr. Dawson, who has been active in the industry since 1926, was sales manager for Alco Valve Co. and participated in educational activities of R.S.E., A.S.R.E., and other industry associations.

George W. Wilson, who has been active as manager of jobber sales, will assist Mr. Dawson.

Douglas K. MacIlvaine, former utility company executive, will be works manager, including administration of the engineering department. During the war, he was engaged in the electrical engineering and manufacturing in the electronic and control field. He is a member of A.I.E.E., I.R.E., A.S.R.E., and other engineering groups.

Evan Jones who has had wide experience in the control field will be electrical engineer.

Conklin Is Admiral Appliance Manager

CHICAGO—L. H. D. Baker, vice president, appliance division, Admiral Corp., has announced the appointment of Harold D. Conklin as manager of the appliance division.

Mr. Conklin joined Admiral in November, 1944, as manager of the electric range division.

(Continued on Page 14, Column 1)

Price Factor Set Pricing, Strikes Retard For Commercial, Air Conditioning Appliance Activity

WASHINGTON, D. C.—A profit factor for commercial refrigerators of 4.9% has been established by the OPA in amendment No. 4 to Supplementary Order No. 119—Individual Adjustments for Reverting Manufacturers, effective Oct. 3.

The products to which this OPA order applies includes display cases, reach-in refrigerators, water coolers, ice cream cabinets, other types of commercial refrigeration equipment, and all types of air conditioning equipment, (apparently either built for remote installation or self-contained).

The matter of whether or not includes condensing units is in doubt. Some manufacturers of condensing units have been known to have received price adjustments under MPR 591. This would mean that condensing units are being considered as a component, rather than a complete piece of equipment.

Reconverting manufacturers of eligible products may figure their new ceiling prices by adjusting their

(Concluded on Page 44, Column 1)

DETROIT—Reconversion of the electric refrigerator and major appliance industry as of the first week of October, more than a month and a half after the end of the war, seemed stymied for the moment by a number of things for which the industry hardly seemed responsible.

Given many a pat on the back for the speed with which they had converted their plants, the manufacturers were finding it difficult to get their products into the hands of consumers who are literally crying for them, for the following reasons:

1. Failure of the OPA pricing authorities to establish a formula that would enable the companies to set a price on the merchandise they have produced.

2. Specifically in the case of refrigerators, to remove wartime

Predict L-5-d Revocation by Oct. 15

DETROIT—Limitation Order L-5-d, restricting the sale of refrigerators to essential users who had obtained a priority, "will be revoked very soon, probably not later than Oct. 15," regional WPB offices are said to have been informed by WPB headquarters in Washington.

This will mean that the dealers handling refrigerators can sell refrigerators to anyone they please—providing, of course, they have a price to quote the customer.

restrictions that keep the sale of refrigerators under strict rationing rules.

3. The activity of organized labor, which closed the plants of the Frigidaire division of General Motors in Dayton on Oct. 1, over the issue defined by the CIO union as "the failure of Frigidaire to decide a penalty for three men suspended indefinitely for causing a work stoppage and for one man who was accused of fighting."

The pricing problem is probably the major block to getting merchandise into the hands of consumers. The manufacturers and the OPA are both claiming that the blame for the delay rests with the other.

OPA Administrator Chester Bowles last week claimed that appliance manufacturers in particular had been remiss in getting back information necessary for the setting of prices.

On the other hand, just a few days ago OPA officials admitted that they were making surveys to try to determine the average "realized profit" for each of the various lines of appliances, and that "results of the survey, it was hoped, would be available within a few weeks."

"Realized profit" was defined as the difference between total net sales and total cost of goods sold stated as a percentage of total net sales.

Further light on this matter of "realized profit" may be had from Chester Bowles' answer to the national retailer committee's request for a "cost plus" pricing formula, in which he defended cost absorption, saying:

"In the case of the big-ticket items, such as refrigerators, washing machines, vacuum cleaners, etc., it is the announced policy of this Office to require absorption only insofar as this can be done without reducing margins of the independent appliance stores, which sell the bulk of these items, below the levels realized in peacetime."

"Realized margins in peacetime have always been below initial markups, by reason of selling below list price, trade-ins, close-out sales, etc. In requiring retailers to absorb any price increase which may be granted at the manufacturing level to the point at which their margins are equal to those they realized in peacetime, we are in effect asking them to do at the very worst only what they did in a free competitive market."

The problem of what will happen when a company voluntary uses the prewar ceiling price is a little more complicated.

Bendix Home Appliances, Inc., has told its distributors to advise dealers that the October, 1941, installed selling price is to be used on retail sales commitments. This price is \$169.50 and includes a mounting base, installation, and one year's service, but with special plumbing or wiring extra.

Bendix, it is understood, has been shipping dealers on memo the samples being shown, and it is thought probable that distributors and dealers may be required to absorb any increases in the manufacturer's price.

Frigidaire Entering New Product Field

DAYTON, Ohio—Frigidaire division of General Motors will broaden its lines to include kitchen cabinets, and "sometime next year," a complete laundry equipment line.

It is anticipated that all Frigidaire distributors will have a sample supply of the new kitchen cabinets before the turn of the year, although the retailing program will probably not get under way until after Jan. 1.

There is not much more information on the laundry line other than the knowledge that production will probably be started sometime next year. It is known that Frigidaire has field tested a new automatic washer.

The cabinet equipment will include base, wall, and utility cabinets and sink units, all of various sizes. Cabinets will be constructed of high grade steel and finished in white baked enamel. Dealers will be instructed on kitchen planning and designs for "packaged centers"—standard packages of various sizes for the refrigerator, range, and sink centers.

Frigidaire officials have also indicated the "order" in which various refrigerator models will be produced. The standard MI-7, a 7-cu. ft. model, is being produced first, and the DI-7, with extra features, will also be available soon. The "Cold-Wall" models may not be available until 1946.

Home Freezers Sell
75 Per Week at
Macy's Since Aug.

By Ross Potter

NEW YORK CITY—Off with the starting gun, R. H. Macy & Co.'s major appliance department has sold an average of 75 home freezers a week since it began receiving shipments during the middle of August, according to George T. Mortland, sales manager of the department.

The freezer being sold is the Frigidaire, made by New York's Refrigeration Corp. of America.

The new home freezer comes in four models, carrying OPA ceiling prices as follows:

6 cu. ft.	\$249
10 cu. ft.	349
14 cu. ft.	449
29 cu. ft.	594

(Concluded on Page 4, Column 1)

Bendix Discloses Product Changes

SOUTH BEND, Ind.—The new Bendix home laundry with its "15 engineering improvements" and complete advertising and sales plans for the new line were revealed to more than 9,000 persons representing 8,400 dealers at 92 meetings last month.

The two leading improvements claimed by Bendix Home Appliances, Inc., as disclosed to the NEWS, are (1) the water entrance has been shifted from the side to the top so that the water enters directly over the clothes and (2) the rinsing action has been changed from two spray rinses and one deep rinse to one flush rinse and two deep rinses. This leaves the clothes freer than ever of soap, the manufacturer claims.

The other engineering changes, all of which were developed during the past four years, are:

(3) An improved timer; (4) Im-

(Concluded on Page 4, Column 4)

Weston to Head California Electrical Association

LOS ANGELES—Gerald W. "Jerry" Weston has been appointed managing director of the Southern California Radio & Electric Appliance Association with headquarters in Los Angeles.

For the past two years Mr. Weston was with the War Production Board in Washington, D. C. in charge of the section handling the electrical appliance, radio, and mechanical repair shops of the country. Prior to this he spent a year with the National Electrical Contractors Association in Washington as assistant to the general manager; and before that served 19 years as manager of the Electric Association of Kansas City, Mo. He is a past-president of the International Association of Electrical Leagues, and a graduate of Purdue university.

Mr. Weston will be introduced to the association at a dinner meeting the night of Nov. 1 in Los Angeles, at which time he assumes his new responsibilities.

Donnell Directs Texas Distributorship

HOUSTON, Tex.—W. B. Donnell has been named general manager of Reader's Wholesale Distributors here, according to an announcement made by Hymen Reader, owner of the firm.

For the past nine years Mr. Donnell has been associated with the Sloane-Blabon Corp. of New York.

In New Post



G. W. WESTON

Appointed managing director of the Southern California Radio & Electric Appliance Association.

McCormick Rejoins Raymond Rosen & Co.

PHILADELPHIA—J. J. McCormick has joined the staff of Raymond Rosen & Co. as merchandising manager of the Kelvinator products department after serving during the war as district rationing executive of the OPA in this city.

Mr. McCormick was with the firm for seven years prior to the war.

Kruaters Back, Nobles Added to Gibson Staff

GREENVILLE, Mich.—With the cancellation of Gibson Refrigerator Co.'s prime war contract for in-board flaps on B-24 bombers, reconversion and expansion plans are under way with the appointment of Earl S. Nobles as divisional sales manager of Gibson district No. 8 and Walter D. Kruater's return to his prewar position of national service manager.

Mr. Nobles' district consists of Kansas, Missouri, southern Illinois, eastern Tennessee and Kentucky, and northern Mississippi.

Since his entry into the appliance industry 23 years ago, he has held positions with Landers, Frary & Clark as utility sales manager; and with A-B Stoves, Inc.

Knapp Takes Over at Wesco in Fort Worth

FT. WORTH, Tex.—W. E. Knapp, Jr., has been appointed manager of Ft. Worth branch of Westinghouse Electric Supply Co., succeeding E. C. Cummins, who resigned, according to C. M. Mackey, Wesco's southwestern district manager.

Mr. Knapp has been in the electrical business for 20 years, joining Wesco in 1937 at Dallas, Tex., and was transferred to the sales department at Fort Worth in 1939. He was born in St. Louis in 1906 and attended public schools in that city.

No Trade-ins, Seconds, Cold Canvassing In This California Dealer's Plans

FRESNO, Calif.—A lot of the pre-war headaches of appliance promotion and management are being "eliminated in advance" in the post-war plans of Chicago Furniture Co. here, leading San Joaquin Valley appliance dealerships.

For one thing, Cy Darbinian, head of the concern, (which averaged 175 refrigerator sales a year in peace-time) claims he positively is going to eliminate the practice of accepting trade-ins and reselling them. Like other competitive dealerships before the war, Chicago Furniture took in trade-in refrigerators, washing machines, etc., and patched them up in its own electrical shop. In the post-war period, however, it will be all "clean business," with absolutely no trade-ins involved in any transaction.

"We've closed up our trade-in appliance store permanently," Mr. Darbinian explained, "on the basis that there is no use trying to cater to 5% of our clientele and hampering the other 95%. I feel that no appliance man ever profited through handling trade-ins when the cost of tying up space, advertising, separate book-keeping, etc., is totaled up.

"It just isn't good business, and will be worse with the prospective OPA ceilings on new appliances limiting the amount of spread which can be counted on with trade-ins.

"Consequently, we won't accept a single one, and instead will tell the customer that he can sell his own appliance just as effectively as we can by advertising it in the local newspaper. We'll help customers write an advertisement; even furnish the names of prospects if we have any, but we will not bring the element of a used refrigerator or washer into any of our sales."

All of the valuable space saved by this step will be transferred over to display of new appliances. Here, too, Mr. Darbinian is planning significant changes. "I'm going to broaden out my lines to cover more brands and

more customers," he pointed out. "My experience in talking with post-war customers has convinced me that versatility in presenting various manufacturer's products will be a real asset in the future."

Right now plans are for an appliance department at least twice the size of the former section, and possibly four times as large. Using the most prominent space in the store, Mr. Darbinian will spot small appliances around the cashier's office, and carry washing machines and home laundry equipment in a separate department.

Though eliminating trade-ins, Chicago Furniture will continue to offer warranty service and repairs for its own customers—by means of a small electrical shop set up in the rear of the store and staffed with expert mechanics.

"We will deliver and install our own merchandise complete," Mr. Darbinian indicated, "including service beyond warranty expiration as a goodwill builder. We plan to do all our own work and thus be free of contract service arrangements, and the necessity of selling service, which has always been another profit leak in this area."

Another change will be in sales management and methods. Like other homefurnishings houses with a vast appliance business, Chicago Furniture formerly had outside salesmen running down leads and working for prospects on outside tips. There will be no such "outside work" in the postwar store.

"Our men will remain in the store and take each entering customer in turn," Mr. Darbinian summed up. "Of course they may keep up individual lists, and sell their own customers—but any outside contacts will be made 100% by telephone. We feel we'll have our hands full for the next three years, and that the above changes set us up most efficiently to meet the market."

Roy Blanchard Joins Electromaster, Inc.

DETROIT—Roy B. Blanchard, advertising executive with the Chrysler and Plymouth divisions of Chrysler Corp. since 1940, has been appointed director of advertising of Electromaster, Inc., manufacturer of electric ranges and water heaters, according to Gerald Hulett, vice president of the company.

Electromaster's postwar distribution and sales program has changed radically from its prewar setup, then directed exclusively through light and power companies, to expand into a wide variety of wholesale and retail outlets including appliance, hardware, furniture, and department stores as well.

Carrying the program into effect will be R. B. Marshall, president of the company; Mr. Hulett and H. H. Hubbard, vice president; Mr. Blanchard; R. Russell Brown, director of merchandising; Russell Bloomberg, sales manager of the commercial cooking equipment division; E. J. Heinrich, service manager; and the firm's 11 district managers across the country.

Mr. Blanchard is no stranger to the industry. He was sales promotion manager at Norge before the war, and prior to that a sales and advertising executive with Buick Motor Co.

Harry Ryan Goes Up

CHICAGO—Appointment of Harry Ryan as sales and merchandising manager of the RCA-Victor Distributing Corp. home appliance division was recently announced by Standish W. Donogh, president of the corporation and Midwest regional manager of RCA.

Mr. Ryan succeeds Ray Harrer, deceased. Having seen service with RCA for the past 11 years, Mr. Ryan was, previous to this new appointment, assistant Midwest regional manager. Before joining the corporation, he was assistant sales manager of Marlboro Electric Co.

Among the products distributed by the company are: Sunbeam appliances in the Chicago, Detroit, and Kansas City areas; and also the Whirlpool line of laundry equipment made by 1900 Corp. and the Ben-Hur home freezer in the Chicago and Kansas City territories.

Brock Heads G-E Dept.

BRIDGEPORT, Conn.—A. J. Brock has been appointed manager of the General Electric Co.'s Home Bureau, it has been announced by C. R. Pritchard, general sales manager of the appliance and merchandise department.

The G-E Home Bureau is a technical and advisory service in electric wiring, equipment, kitchen planning, heating, and air conditioning, offered by the company to architects and builders.

Mr. Brock joined G-E in 1936, when he became district manager of the Home Bureau in St. Louis. He was subsequently sales manager of James & Co., G-E appliance distributor in St. Louis.

More recently, he was a major in the Army Air Forces, serving in the New Guinea theater as a combat photographer and intelligence officer.

Berkeley at Crosley

CINCINNATI—Elwood R. Berkeley's recent appointment as divisional manager in charge of radios and major appliances of American Wholesalers in Washington, D. C., distributor for the Crosley Corp., has been announced by David L. Krupsk, managing partner.

Mr. Berkeley was formerly sales promotion manager for the Premier division of the Electric Vacuum Cleaner Co. of Cleveland. Previous to his association with that company, he spent approximately two years with the Nash-Kelvinator Corp. He has also served for six years in the merchandising of major household appliances for the Hecht Co. of Washington, D. C.

Frank Ryan Joins Apex

CLEVELAND—Frank S. Ryan has been appointed advertising and sales promotion manager for the Apex Electrical Mfg. Co. here.

Mr. Ryan served as chairman of the Westinghouse Electric Corp.'s War Production Coordinating Committee during the war. Previous to that he was in charge of advertising production for refrigeration and laundry equipment for Westinghouse's merchandise division in Mansfield, Ohio.

"Sure she's happy—she just ran into a door!"



And what a door! That Shelvador* on the Crosley, Tom, is a salesman's dream. You don't have to say anything. You let the refrigerator do the talking and does it talk!



First thing, show the customer the side-by-side refrigerators. You have the Demonstration Blind pulled down over the Shelvador*. You explain that both are excellent refrigerators—with all modern improvements, gadgets and so on.



Then you raise the blind on the Shelvador* and step back. Bang! She gets it right away. Not much left to do but get out the order book and ask, "Name and address, Madam?" The Crosley looks like two refrigerators with that double front-row storage space.



That's just the beginning. Because a new refrigerator is an event in any home and every woman loves to show it off to her friends. And when her friends get a load of that Shelvador* with all that storage space—brother, they come in to see me. You just can't beat a product that delivers its own sales message!

*REG. U. S. PAT. OFF.

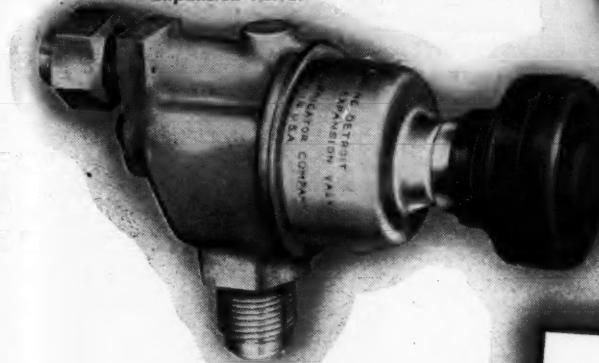
CROSLEY
THE CROSLEY CORPORATION, CINCINNATI 25, OHIO

RADIOS • RADIO-PHONOGRAFS • FM • TELEVISION • SHORT WAVE • ELECTRONICS • RADAR • REFRIGERATORS • HOME FREEZERS
LAUNDRY EQUIPMENT • RANGES • KITCHEN SINKS & CABINETS • HOME OF WLW, "THE NATION'S STATION"

"DETROIT" Automatic EXPANSION VALVES

For long life and highest satisfaction in operation

No. 672 "Detroit" Automatic Expansion Valve.

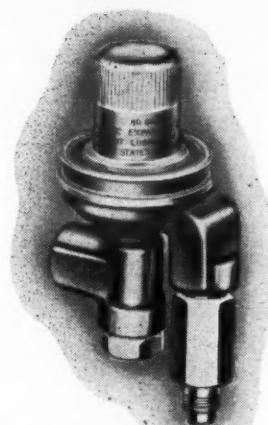


No. 672 Automatic Expansion Valve

No. 672 "Detroit" Automatic Expansion Valve's high quality makes it ideal for original equipment and replacement service.

Only one moving part—adjustment is easy; friction and wear are minimized. Large strainer is easily removed. Special bellows resists corrosion, assuring long life.

Available either with rubber breather cap or knurled metal cap. Pressure ranges 25" vacuum to 25 pounds pressure or 0 to 50 pounds pressure. Orifices—1/32", 5/64", 5/32", or 7/32". Inlet flared nut for 1/4" or 3/8" O.D. tubing. Capacities—.35 to 3.6 tons Freon, .66 to 6.6 tons Methyl Chloride.



No. 892 "Dura-Fram" Automatic Expansion Valve.

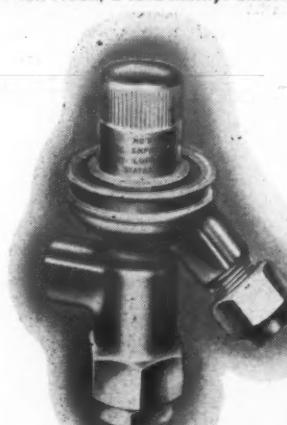
No. 892 and 895 Automatic Expansion Valves

Special brass body assures long life, freedom from corrosion. Silver brazed joints prevent refrigerant loss. Diaphragms of special alloy, remarkably reliable in service. Needles and seats are of Delubaloy—hard, corrosion resistant.

May be located at any point—even in the refrigerated compartment without affecting their operation.

No. 892 has a range of 15" vacuum to 40 pounds pressure. Inlet 1/4" or 3/8" SAE (for 3/8" or 1/4" reducing flare nut). Outlet 1/4" female IPT, 3/8" or 1/2" SAE. Capacity—1/2" ton Freon; 1 ton Methyl Chloride.

No. 895 has a range of 15" vacuum to 40 pounds pressure. Inlet flared nut for 1/4" or 3/8" tubing. Outlet 1/4" female IPT, 3/8" or 1/2" SAE. Capacity—1 ton Freon; 2 tons Methyl Chloride.



No. 895 "Dura-Fram" Automatic Expansion Valve.

DRYING AUTOMATIC EXPANSION VALVES

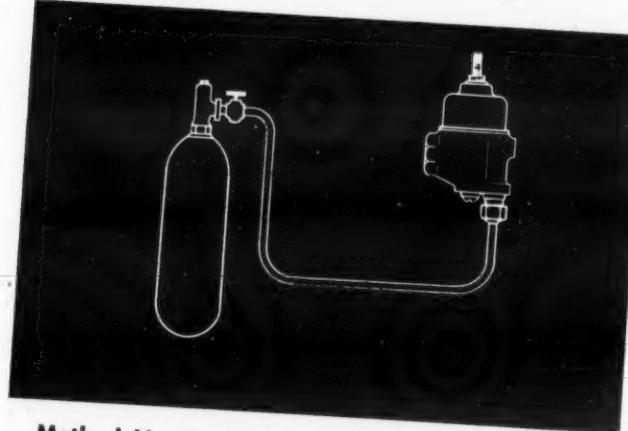
No. 7 of a Series

Moisture in a refrigeration system may so permeate the valves that they may need to be dried separately.

Detailed here are four effective methods of drying "Detroit" Automatic Expansion Valves—No. 672, 892 and 895.

When a No. 672 valve is heated it must be kept in an upright position so the dampening fluid inside the bellows shell will not escape. On No. 672 valves having a range of 0 to 50 psi, loosen adjusting spring completely. On No. 672 valves having a range of 25" vacuum to 25 psi, set adjusting screw at midpoint. Always remove the adjusting screw cap or rubber breather cap before dehydrating.

No. 892 and 895 valves may be dehydrated in any position. Remove adjusting screw cap and rubber gasket, and loosen adjusting spring completely before dehydrating.

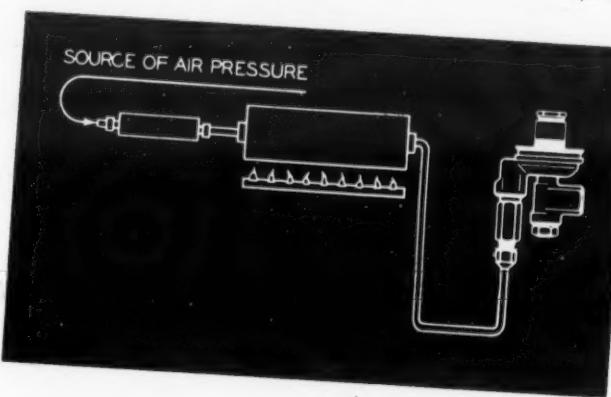


Method No. 2 Atmospheric Oven (4 hours)

Method No. 2 Atmospheric Oven (4 hours)

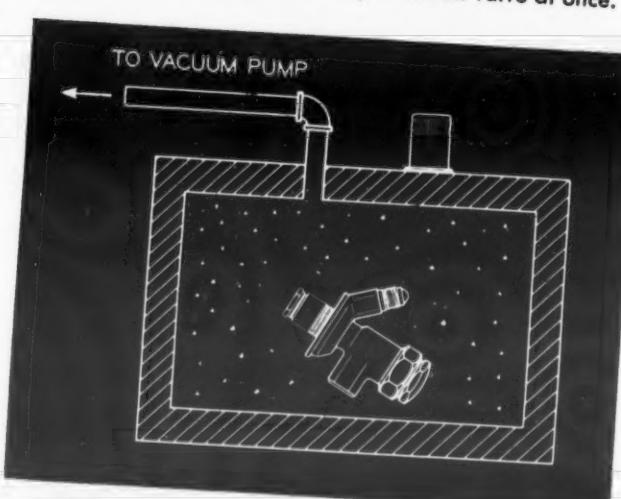
Use any type oven, but temperature regulation is absolutely essential to avoid damaging the valve.

Dehydrate 4 hours at temperature of 220° F maximum. Install or cap as soon as valve has cooled to avoid entry of moisture from air. No. 672 Valve must be kept in an upright position.



Method No. 3 Hot Dry Air (30 minutes)

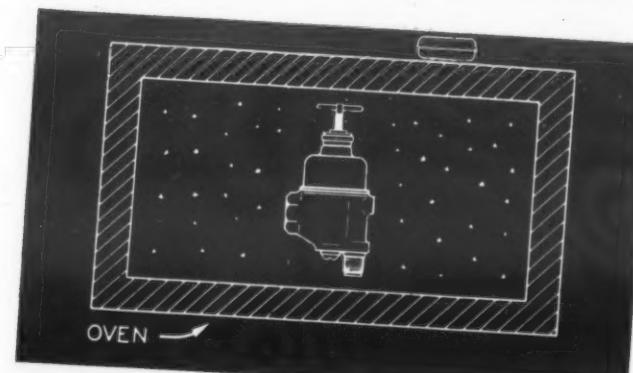
Connect inlet of valve to source of hot dry air, under pressure (see sketch). Blow hot air (220° F maximum) thru valve for 30 minutes. Cap or install valve at once.



Method No. 4 Heat and Vacuum Oven (3 hours)

Required is a temperature regulated vacuum oven and a vacuum pump capable of drawing a vacuum of 26" to 27" mercury minimum.

Place valve in oven, heat to 160° F maximum (No. 672 upright); hold under heat and vacuum for at least 3 hours. Cap or install valve at once.



DETROIT LUBRICATOR COMPANY Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

DETROIT LUBRICATOR COMPANY



General Offices: 5800 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"DL" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

Reprints of these articles, size 8 1/2" x 11", and punched to fit a standard 3-ring binder, are available on request. Write for your copies.

Home Freezers--

(Concluded from Page 1, Column 3)
There has been little difference in sales between the four sizes, Mr. Mortland reported. During their first week three of the models made exactly the same sales record, with the fourth being only one behind. All are continuing to do well.

The majority of buyers have been suburban home owners and hobby farmers, he said, living within a 50-60 mile radius of the city.

This home freezer was the first to be released for retailing in the New York area, as far as he knows. He doesn't know of any others making deliveries yet.

John Bess, president of Refrigeration Corp., filled out the story on how his company has been able to deliver the goods so soon.

"We have been making units for the government right along," he explained. "That simplified WPB clearance. And since we knew what civilian units we were planning to make, OPA had OK'd our price listings by the time our first new models were ready."

The company kept up production on its rebuilt units during the war by scouring the country in 1942 for their own older boxes. Altogether they picked up some 7,500 of them, he said.

Refrigeration Corp. makes the complete freezer, using Tecumseh compressors.

Is the company making deliveries to any retailers besides Macy's?

Not yet, Mr. Bess said. But very soon outlets in other cities will be getting deliveries too.

Washer Producers Get Increase--

(Concluded from Page 1, Column 4)
stay on the machine until it is delivered to the buyer's home:

Part of the OPA statement on the washer pricing order is, as follows:

"Retail prices for washing machines and ironers are divided into three groups, reflecting average difference in transportation costs to three geographical zones. Every tag attached to a machine by the manufacturer must show the states in which the retail price applies. The tag also must carry the manufacturer's name or brand name and the model number.

In Zone 1 (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, West Virginia, Ohio, Kentucky, Indiana, Michigan, Illinois, Wisconsin, Missouri, Iowa, Minnesota, Kansas, Nebraska, South Dakota, North Dakota, and District of Columbia), retail prices for washing machines and ironers will range from \$29.95 to \$189.95.

In Zone 2 (Georgia, Mississippi, Tennessee, Louisiana, Florida, Arkansas, Oklahoma), retail prices will range from \$34.95 to \$194.95.

In Zone 3 (Washington, Oregon, California, Nevada, Montana, Idaho, Utah, Colorado, Wyoming, New Mexico, Arizona, Texas, Alabama), retail prices will range from \$39.95 to \$199.95.

"These uniform prices, which are based, OPA explained, on manufacturers' lowest ceilings (adjusted for the reconversion price increase) to

distributors, may be replaced from time to time by individual pricing orders affecting the brands of particular manufacturers. These will not change the price levels, but may accommodate more closely the variations in customary practices as to zoning, differentials, and the like. It will take some time to work these out, however, so the present method was adopted to enable immediate and specific retail pricing and pre-ticketing.

"This policy assures distributors and dealers handling chiefly reconversion goods that they will not have to absorb beyond the point where they can continue to recover their 1941 average realized margins.

"These are the margins they actually received on goods, after markdowns, trade-in allowances, special discounts, etc., rather than the margins that would have resulted if the dealers always got the list prices without the allowances.

"A survey of appliance distributors showed that their initial margins on washing and ironing machines averaged 20.7%, while their realized margins averaged 17.1%. Similarly dealers' initial margins in 1941 averaged 40%, while their realized margins averaged 30%.

"It is clear from this that neither the 7.7% industry-wide increase factor nor any probable individual adjustments for manufacturers will bring the average margins of distributors and dealers below these previously realized margins.

"Because distributors are able to absorb only one-fourth as much as dealers, their ceiling prices have been worked out to allow the distributor

to pass 80% of the increase on to the dealer, absorbing 20% himself. This is done by permitting the distributor to add 4.9% to his October, 1941 prices for washing and ironing machines.

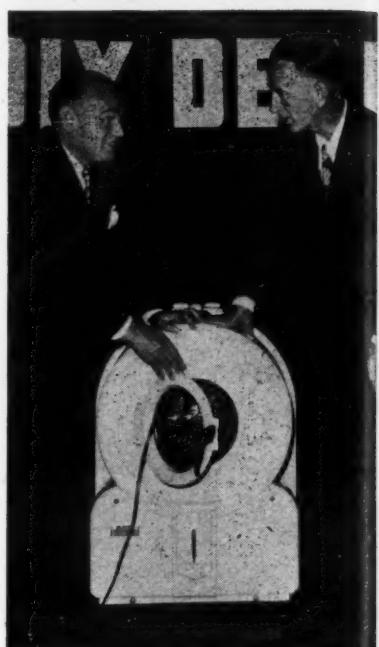
"Since the reconversion increase factor was based on October, 1941 prices, some individual increases granted manufacturers after that time are revoked by this more recent action.

"New rules are provided, under which manufacturers can determine their ceiling prices for old models on the basis of the prices they quoted between Jan. 1 and Oct. 15, 1941. The 7.7% increase factor may be added to these ceilings.

"New automatic pricing rules also are provided for new models, permitting manufacturers to figure their own ceiling prices in line with Oct. 1-15, 1941, prices adjusted for the reconversion increase.

"The 7.7% increase factor may be denied in whole or in part to any manufacturer who discontinues production of his low-end model or fails to maintain about the same proportionate output of low-cost models as he produced between July 1, 1940, and June 30, 1941. Otherwise, such a manufacturer would in effect get a double price increase."

Standard and Deluxe



This is the standard model of the Bendix automatic washer, here being demonstrated to Mayor Edward Jeffries of Detroit (right) by W. A. Becker, Bendix midwest sales manager.



This is the deluxe model Bendix, which will be made available shortly.

Chris Steenstrup Retires; 'Daddied' G-E's Unit

SCHENECTADY, N. Y.—Christian Steenstrup, the "daddy" of the G-E hermetically sealed refrigerator mechanism" and consultant for the General Electric Co.'s refrigeration Engineering division, retired Sept. 1. He had completed 44 years of service with the company.

Best known of Mr. Steenstrup's accomplishments is the hermetically sealed refrigerator unit, which he developed and built in 1925. For the first time these units, which had previously been cumbersome and expensive, were brought within reach of the general public.

With this unit Mr. Steenstrup made refrigeration history and won for a second time General Electric's coveted Coffin Award for outstanding contribution to the electrical industry. He had earlier won this recognition for his development of a method of hydrogen copper brazing which made the process practical for commercial work.

The story of Chris Steenstrup is typically American. His career began at the age of 14 when he became an apprentice machinist in a Danish machine shop.

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you'll buy **PR**
REFRIGERATION EQUIPMENT
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MANUFACTURING CORPORATION
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In addition to refrigeration dryers, Weatherhead also manufactures complete lines of valves, manifolds, fittings, drain cocks and other products for the following industries:

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APPLIANCE MANUFACTURERS

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Plants: Cleveland, Columbia City, Ind., Los Angeles, Canada—St. Thomas, Ontario

BRANCH OFFICES: NEW YORK • PHILADELPHIA • DETROIT • CHICAGO • ST. LOUIS • LOS ANGELES

NEWARK, N. J.—Frank M. Schmitt has been appointed to the newly-created post of advertising and sales promotion manager for Krich-Radisco, Inc., New Jersey radio and electrical appliance distributor.

Previously, Mr. Schmitt was advertising manager of Freed Radio Corp., New York City. He formerly served in an advertising capacity with RCA Victor Division, Radio Corp. of America, at the Harrison and Camden, N. J. plants.

Nominations Made For A.S.R.E. Officers

NEW YORK CITY—Nominations for election to national office in the American Society of Refrigerating Engineers have been submitted by A. B. Stickney, chairman of the nominating committee.

Nominated for national president of the A.S.R.E. is Charles S. Leopold, Philadelphia consulting engineer. He is widely known in the field and has contributed works to the Society's journal and other publications in the field.

Roland H. Money, chief refrigeration engineer for Crosley Corp., has been nominated for the office of first vice president. He was active in the organization of the Cincinnati chapter, and has been active in a number of committees in the society.

Nominee for second vice president is Clifford F. Holske, sales manager in New York for Vilter Mfg. Co. He is a member of the board of directors and has served as chairman of the Program Committee.

Nominated for the office of treasurer is Prof. Burgess H. Jennings, chairman of the department of mechanical engineering at Northwestern Technological Institute. He has served as chairman of the Program, Standards, and Awards Committees.

For directors, the committee nominated John G. Bergdall, general works manager of York Corp., former treasurer of the society (who asked to be relieved of this duty because of the press of reconversion work); H. C. Diehl, director of the Refrigeration Research Foundation; Dr. Richard C. Jordan, director of Industrial Laboratories at the University of Minnesota and chairman of the Twin City section; Dr. Mary E. Pennington, consulting engineer on food storage; Arthur B. Schellenberg, former president of Alco Valve Co. and active in the Society in many capacities; and E. K. Strahan, outgoing chairman of the New Orleans section.

Chevalier Forms Own Commercial Dealership

JERSEY CITY, N. J.—Edward J. Chevalier recently announced the formation of a wholesale distribution organization for air conditioning and commercial refrigeration and ventilating equipment. Home office and showroom of the firm is at 3010 Hudson Blvd. here.

McQuay has appointed Mr. Chevalier's firm as wholesale distributor for their line of air conditioning and commercial refrigeration equipment in the state of New Jersey, it was also reported.

Until his formation of the new company, Mr. Chevalier was sales manager of the commercial refrigeration and air conditioning division of Krich-Radisco, Inc., here.

WATER COOLERS WITHOUT PRIORITY



Glass filler coolers for cafeterias; bubbler coolers for offices, stores, factories; and commercial coolers for all applications... available without priority. Complete range of models and sizes.

DAY AND NIGHT COOLER DIVISION
MONROVIA - CALIFORNIA
FACTORY REPRESENTATIVES
NEW YORK CHICAGO
A.C. Homeyer, 682 Bdwy. • Marc Shantz, 565 Wash. Blvd.
ST. LOUIS DECATUR, GA.
R.H. Spangler, 3331 Market St. • J.E. Parker, 228 2nd St.

Orders Increasing For Freezer Unit Controls

MILWAUKEE—Continued growth of low temperature refrigeration equipment, especially in the frozen food field, also means an expansion of activities in temperature controls and allied equipment, believes E. A. Vallee, vice president and general manager of Automatic Products Co.

Constantly increasing orders for low temperature controls as well as other types of refrigeration control equipment are being received, according to Mr. Vallee, who adds that new additions are being made to this staff.

Expected expansion of air conditioning sales will also mean increased production of control equipment, he added.

New Jobber In Bay City

BAY CITY, Mich.—Auto Parts & Tool Co., 108 N. Henry St. here, has announced its entry into the wholesale refrigeration supply field.

Lidro Enterprises Buys Cleveland Cabinet Co.

CLEVELAND—Lidro Enterprises, Inc., has announced its purchase of all the holdings of Cleveland Refrigerator Co., including a large one-floor building at 6600 Sidway Ave., where full operations will be continued.

Cleveland landmark for a quarter of a century, the Cleveland Refrigerator Co. has been engaged in the production of refrigerated showcases, butcher coolers, and kindred items.

Lidro Enterprises, Inc., is headed by William Drosd and A. J. Litt, who also operate National Fixtures Mfg. Co., 1600 Woodland Ave. here, manufacturer of a line of stainless steel restaurant fixtures. Offices of Lidro Enterprises are in the Public Square Bldg.

Mr. Litt, an attorney, is now devoting his full time to the manufacturing business. Mr. Drosd was associated with the brewery industry in Cleveland and Miami, Fla., before joining National Fixtures Mfg. Co.

Elpeco To Distribute Through Parts Jobbers

PHILADELPHIA—Distribution of the refrigeration products made by Electric Power Equipment Corp. will be "through selected jobber outlets, and supported by a sales and service campaign in behalf of the independent service contractor," announces M. E. Miller, president of the company.

The company's line of commercial refrigeration systems and refrigeration accessories will start moving from the production lines in the fourth quarter of this year, it was stated. Just announced as a new addition to the line is the "Thermotron," a flow control instrument.

First jobber appointments by Electric Power Equipment Corp. include the Refrigerating & Power Specialties Co. of San Francisco, which also has branches in Seattle, Portland, and Tacoma.

Refrigerating & Power Specialties Co. is remodeling its stores to provide for a "cafeteria style" or self-service of refrigeration parts and

supplies.

The jobber's Portland store has already been altered to feature the new service, and the new Tacoma store will shortly be ready. This store will be designed for complete self-service, with no counters, but only a checking-out stand. Merchandise will be on display tables and shelves.

Oakland Firm Set Up By Rauch & Monroe

OAKLAND, Calif.—Jess E. Rauch and James Monroe have established the Rauch & Monroe wholesale refrigeration parts and supply firm at 3456 Telegraph Ave. in Oakland.

This new firm will handle a complete line of refrigeration and air conditioning supplies, and will also offer engineering service. The building which has been taken over on Telegraph Ave. is being remodeled to suit the needs of the business.

Mr. Rauch was for many years an executive of the California Refrigerator Co. Mr. Monroe was formerly affiliated with the Refrigeration Service & Supply Co. of Honolulu.

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Patented DIAPHRAGM PACKLESS

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Embody the Latest Engineering Developments for the AIR CONDITIONING AND REFRIGERATION INDUSTRY

For dependable, safe control of household commercial or industrial Air Conditioning and Refrigeration products—let Kerotest engineers work with you.

KEROTEST MANUFACTURING CO.
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Patented in over 20 countries
Over 100,000 valves
in use
in
the
U.S.A.
and
over
the
world

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ABSO-DRY-PRESSURE SEALED DRYER

Most efficient due to the exclusive Henry vacuum drying and pressure sealing process. Escape of dehydrated air when seal cap is removed proves unit is absolutely dry! Soldered brass shell with dispersion tube and dehydrant compression spring. Choice of Silica Gel or Activated Alumina.

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ASK YOUR JOBBER ABOUT IT
Henry Valve Company
1001 N. SPALDING AVE., CHICAGO

WHERE EVERY
SERVICE MAN LOOKS
FIRST FOR
REFRIGERATION
PARTS & SUPPLIES
WRITE FOR CATALOG

THE HARRY ALTER CO.
1728 S. Michigan Ave. Two Big Warehouses to Serve You
Chicago, 16, Ill.
134 Lafayette St. New York, 13, N.Y.

CENTURY
Mechanically and
Electrically Balanced
MOTORS

Are
Remarkably Free
From Vibration

1/6 to 600 horsepower

Century Motors' unusual freedom from vibration and exceptionally quiet operation are the result of careful electrical and mechanical balancing. In air conditioning applications this contributes much to the quiet comfort and is an important factor in prolonging motor life.

1. Century rotors are dynamically balanced on both ends.
2. The electrical and magnetic circuits are symmetrically constructed to produce an even torque.
3. Slots are skewed to produce a steady torque—eliminating jerks.
4. Cushion bumpers cushion the shock of the shaft shoulder against the bearing—which may be caused from irregularities of V-belts.
5. Sleeve bearings are diamond bored for accuracy after they

are assembled in the end bracket.

6. Bearing surfaces on the shaft are ground to close tolerances and highly polished.

Such details of Century engineering, design, and construction help to produce quieter, free-running motors. Whatever the application, there are Century Motors built to stand up under the toughest demands of present day air conditioning installations.

Your nearest Century Application and Service Engineer will gladly give you full details on all the advantages of Century Motors—help you to select the correct motor to meet practically every application demand.

Special motors are available for the unusual situation.

CENTURY ELECTRIC COMPANY

1806 Pine Street St. Louis 3, Missouri
Offices and Stock Points in Principal Cities



G-E Book Tells How To Make Appliance Store Look Like One

BRIDGEPORT, Conn.—Identify your store as an electrical appliance store if you want to build sales and be able to meet competition in good times or bad.

That is the advice now being given to appliance retailers by General Electric Co. in a new book entitled "Your G-E Appliance Store."

Citing the results of a survey made for the company by Walter Dorwin Teague, famous designer and industrial consultant, the book points out that "retail stores, in their very effort to attract attention, have defeated their own purpose. A disordered, frenzied clamor for attention, in which nothing can be heard for the shouting, should give way to a unified, clean, distinctive impression."

On the basis of this finding, the new G-E publication offers concrete suggestions for the unified design of the five basic types of appliance stores. Some of the specific points that are made concerning store fronts are these:

SOME BASIC POINTERS

Strive for clean lines that are direct, attention getting, inviting.

Display the name of your store on a panel mounted flat against the store front over the windows and doors. Distant traffic can be attracted by a smaller projecting, double-faced sign.

First Frigidaire Postwar Range



Tell the public that you sell appliances by including the word "appliances" on your sign.

Keep bulkheads low.

Keep glass area free. Decalcomanias outlining in greater detail the appliances the store carries should be mounted on the door or window just below eye level.

MAKE THE FRAME RIGHT

Pointing out how even the finest painting can be spoiled by a bad frame and improved by a good one, the G-E book asserts that "appliances, too, make far better impressions if they are presented in attractive surroundings—given the proper stage-dressing and harmoniously arranged."

In order to help retailers build "the frame that sells the picture," the book also presents detailed suggestions for laying out the five basic types of stores.

Carrying out its precept to avoid disorder and strive for a store that is noticeable, appealing, clean, and unified, G.E. makes these further basic recommendations.

ARRANGING THE MERCHANDISE

Arrange appliances within the store so that pedestrians can see as many as possible through the windows.

Allow plenty of room for the customer to move around on the sales floor. Avoid crowded aisles.

Provide an adequate service department plus a working demonstration kitchen and laundry.

Group appliances so that shoppers for one item are exposed to many related items.

Make sure that the background for the appliances is as modern as the appliances themselves.

In announcing the new book, A. L. Scaife, advertising and sales promotion manager of General Electric's Appliance & Merchandise Department, asserted that it is probably the most comprehensive yet published by a manufacturer in an effort to help electrical appliance retailers to set up modern, sales-building stores or departments.

INFORMATION OFFERED

Included in the book, in addition to the section on store fronts and arrangements, are chapters telling where to locate a new appliance store; how much space to allow for the appliance display stock; what sort of demonstration rooms should be established; how to use light to boost sales; how to identify the retailer's trucks, and so on.

Another important section of the book is devoted to display merchandisers for all types of traffic appliances and radios. Using the blueprints that are available from General Electric, any woodworking shop or carpenter can build the 12 basic pieces which form any type of display.

Electrimatic

AUTOMATIC CONTROL VALVES AND REGULATORS

2100 INDIANA AVENUE • CHICAGO 16, ILL.

Model BI-17, first of the Frigidaire electric range line to be produced since the end of the war, is now available to the public for unrestricted sale. It has all features of prewar models, including the Radian-tube cooking units, even-heat oven, and the deep-well Thermizer.

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engineering

Prices chargeable by wholesale

distributors to retail dealers, divided between those who regularly buy less than five ranges and those who buy five or more, and prices chargeable by retail dealers to consumers are as follows:

Zone	Dealers: Less than 5	Dealers: 5 or more	Dealers: To consumers
	\$119.79	\$115.35	\$189.95
1	\$122.29	\$117.75	\$193.95
2	\$123.54	\$118.95	\$195.95
3	\$124.36	\$119.73	\$197.25
4	\$125.42	\$120.75	\$198.95

The zones indicated are areas within the continental U. S. as set off by OPA. The prices stated are subject to the usual sellers' terms, discounts, etc., and include delivery, full installation, and one year warranty for the purchaser.

New Glendale, Cal., Dealer

GLENDALE, Calif.—Ace Appliance Co. is the firm name under which Harold Oberlin has published a certificate that he is conducting an electrical appliance business at 6330 San Fernando Rd. here.

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Farmers in Northwest Expect to Pay \$200 for Refrigerators; Would Pay \$500 for 'Right One'

SPOKANE, Wash.—Farmers of the Pacific Northwest, on an average, expect to pay \$200 for a popular sized 8-cu. ft. electric refrigerator, but are willing to pay as high as \$500 for a refrigerator that meets their needs.

These are the conclusions reached in a recent survey conducted by the Pacific Northwest Farm Trio, comprising the *Washington Farmer*, the *Idaho Farmer*, and the *Oregon Farmer*, in which 206 intending farm buyers of electric refrigerators in the three states cooperated.

An earlier survey made the first of the year by this group of farm magazines showed that 27.4% of all Washington, Idaho, and Oregon farmers intend to buy electric refrigerators when available, with an estimated potential demand for 5,836 refrigerators on the farms of the three states in the next 12 months.

Farmers who said they were going to buy refrigerators were asked for detailed information. This information was supplied by 45% of the farmers who gave the following answers to specific questions:

Who will have the most to say as to the type and brand of refrigerator finally bought?

Graves To Direct G-E Manhattan Dealer Sales

NEW YORK CITY—Robert A. Graves has been appointed manager of dealer sales for the New York appliance distributing branch of the General Electric Co., it has been announced by Earle Poorman, manager of the branch.

Mr. Graves has represented General Electric appliance divisions in the New York area since early in the '30's.

In his new position he will be responsible for all G-E appliance sales to authorized dealers in metropolitan New York.

Indianapolis Frigidaire Firm Names 2 To Staff

INDIANAPOLIS—Appointment of F. B. Tucker as sales manager and J. G. Thornburgh as commercial and service manager was recently announced by the Frigidaire Refrigerating Equipment Co. here.

Mr. Tucker was formerly service manager and Mr. Thornburgh was with the commercial and service engineering departments.

Man	.....	12
Wife	.....	54
Both Equally	.....	36
Have you decided what make or brand of refrigerator you are most likely to buy?		

Yes	.....	66
No	.....	132

When you buy your new refrigerator, will it be your first electric refrigerator?

First Electric Refrigerator	.....	159
New Refrigerator is Replacement	.....	46

Other facts developed in this special study were that more farmers expect to buy their electric refrigerators in electrical appliance shops than in any other type of store, with hardware and department stores second and third choices respectively.

Most important features from the farmers' viewpoint are controlled temperature, durability, easy defrosting, and extra space for frozen foods with style being the least important of 11 features.

Most of the new refrigerators bought by farmers cooperating in the Farm Trio survey will be paid for by withdrawing funds from bank or savings accounts with only one tenth of all farmers expecting to pay for the purchase by cashing War Bonds.

Frederick Is Williams National Service Chief

BLOOMINGTON, Ill.—E. E. Frederick has been appointed national service manager of Williams Oil-O-Matic division, Eureka Vacuum Cleaner Co., according to an announcement by W. A. Matheson, manager of the division.

Formerly manager of the plant's standby facilities for Ordnance since October, 1944, Mr. Frederick now assumes charge of all field service. In addition he will head the handling of parts, repairs, factory re-builds, and claims.

Mr. Frederick is a veteran of World Wars I and II and holds the commission of major in the inactive reserve of the United States Army.

Cortland Co. Acquires Location on Broadway

NEW YORK CITY—Announcement is made by Harry Lefkowitz, president, that the Cortland Co., retail household appliances merchandising organization, recently has acquired the three-story building located at 243 Broadway, and will open this fall.

Moisture has various ways of disturbing a person's slumber. The agility of the individual with the leaky roof is to be compared only with the mental labors of the refrigeration service engineer who stays awake nights worrying about some of his moisture cases.

Neither need worry, if he is wise. The first hires a reliable roofer, and the engineer turns to TZ. Both methods are standard practice.

The Moving Dehydrant

HIGHSIDE CHEMICALS CO.

195 Verona Ave.
NEWARK 4, N. J.

Small Manufacturers Reminded of Chance To Get Higher Prices

DETROIT—Reminding small manufacturers who have net annual sales of \$200,000 that they can obtain relief from OPA price ceilings to cover increases in material and labor costs, the Detroit office of the Smaller War Plants Corp. say it will sponsor justifiable applications for small firms.

Recently liberalized OPA procedure will usually permit the small volume manufacturer to establish a new maximum price and place his product on the market after a waiting period of only 15 days, according to Milton A. Holmes, Detroit regional director for SWPC. A small company is not required to prove hardship to qualify under the new order, he added.

The new pricing formula may be employed only if sales of the item to be repriced were less than one half as great in 1944 (exclusive of sales to the government or Allies) as in 1941, it was said. The order does not apply to ceiling prices on parts or components, being applicable only to items complete in themselves, which were produced by the firm before the war.

Peck Has Service Firm

POMONA, Calif.—Peck's Refrigeration Service is the firm name under which Stillman Peck has published a certificate that he is conducting business at 275 N. Garey St.

McLaughlin To Direct Carrier's 'Big Machine' Development Work

SYRACUSE, N. Y.—R. W. McLaughlin has joined Carrier Corp. as assistant director of development in charge of the heavy machinery engineering section according to Herbert L. Laube, vice president.

Mr. McLaughlin's chief assignment has to do with supervision of design and development for centrifugal compressors used in large refrigeration and air conditioning jobs.

Prior to joining Carrier, he was chief of the blower and supercharger division of the Elliott Co.

After his graduation from Iowa State College with a B.S. in Mechanical Engineering, Mr. McLaughlin was associated for a period of years with General Electric Co. in Schenectady in the large turbine engineering department.

Wesco Buys Nichols Firm In Dayton

DAYTON, Ohio—Nichols Electric Co. here has been purchased by Westinghouse Electric Supply Co. and will be operated as a "Wesco" branch with C. R. Benkert, formerly Nichols sales manager, as branch manager.

Charles B. Kennedy, formerly with Wesco in Columbus, Ohio, will be appliance sales manager at the Dayton branch, and M. W. Nichols, former head of the Nichols firm, will continue under special assignment.

Desser Will Operate Baltimore Dealership

BALTIMORE—Desser Refrigerator Co. is the trade name under which Melvin M. Desser will open an 8,000 sq. ft. building for showroom and repair purposes at 1601 W. Mt. Royal Ave. here.

Until 1942 Mr. Desser was distributor for Fleetwood Craftsmen, manufacturer of refrigeration equipment, and he is now resuming the distributorship for all of Maryland. He is also a dealer for Westinghouse, Crosley, and Admiral electrical appliances and refrigerators.

Mr. Desser has been in the commercial refrigeration business for 15 years, having held positions with Ottenheimer Bros. and C. V. Hill Co. prior to entering business for himself.

Mohat Heads Frigidaire Cleveland Area Service

CLEVELAND—C. O. Mohat, formerly service contact man for the Cleveland district, has been appointed service manager of that division, announces H. H. Kennedy, manager of Frigidaire's branch here.

Mr. Mohat, a native Ohioan, brings to the position of service manager a total of 19 years experience as a salesman, service man, and service manager for Frigidaire and various Frigidaire distributors.

His association with refrigeration sales and servicing began in Columbus, Ohio in 1926 and has continued unbroken to date.

MORE GOOD NEWS from PEERLESS

We are now ready to fill your orders for

PEERLESS Cube Makers and PEERLESS

Capacity Boosters. Volume production of these

quality products for superior refrigeration is under way! Priorities are no longer needed.

You can place your orders today and secure prompt delivery.

PEERLESS LEADERSHIP MEANS VOLUME SALES AND PROFITS

Send for our Bulletins No. 200 on PEERLESS

Capacity Boosters and No. 300 on PEERLESS

Cube Makers. Familiarize yourself with the

exclusive features of these PEERLESS prod-

ucts, better than ever before as a result of war-

time research and engineering. For volume,

profit-making sales, offer the ready and waiting

market, products of known leadership . . .

PEERLESS Products!

PEERLESS
of AMERICA, Inc.

Factory, MARION, INDIANA, U. S. A.

Executive and General Sales Offices

333 N. MICHIGAN AVE., CHICAGO 1, ILLINOIS, U. S. A.



We also make
TRACE
REFRIGERANT
LEAK DETECTOR

HIGHSIDE CHEMICALS CO.

195 Verona Ave.
NEWARK 4, N. J.

THAWZONE
THE PIONEER FLUID DEHYDRANT



'We'll Have To Treat 'Em Better, If Veterans Are To Sell Appliances,' Says Sam Vining

New Electric Institute of Boston Given Slants On Coming Appliance Selling Problems

By Ross Potter

BOSTON—"The war isn't over, not by a damned sight, and it won't be over until every man in the service is back home and in a job."

This statement was rammed home last week by Vernon E. "Sam" Vining, appliance merchandising consultant to Westinghouse Electric Corp. but known and loved throughout the industry for his humorous and plainspoken afterdinner talks, in an address to the newly formed Electric Institute of Boston, Inc.

Attended by more than 650 members and guests representing all five branches of the electrical industry, the Institute's first conference on postwar directions heard three top authorities in the field discuss major problems ahead.

The salesman is the key man in our industry, was Mr. Vining's opening point. An idle machine in a manufacturer's plant is idle because two men aren't selling. Cancel the orders produced by two men, statistics show, and one factory worker is out of a job.

Yet salesmen for years have been the most casually treated links in the production chain, he said.

"We ask for references and experience when we're looking for a bookkeeper or a repairman," he illustrated.

"But we used to give a fling at selling to the first man in a clean shirt that came along."

"And then expected the least of them when it came to performance," he added. "It was easy to replace the ones that flopped . . . with some more of the same."

"Most of us here are old birds," Mr. Vining continued. "It isn't easy for us to change our ways. But we've got to change. Because our chances of finding a good salesman with a system like that today are less than one in a hundred."

Experience in the last few years before the war proved, to sales managers who tried it, that picking new salesmen according to definite qualifications for the job could produce a difference in sales figures that no hardshelled businessman wants to ignore, he stated.

It's more important than ever today, he explained, because the industry now has a responsibility far above dollars and cents services alone—the responsibility of getting decent jobs ready for the men who are coming back from Over There.

"And as far as you and I personally are concerned," he commented, "there's just one thing we can offer: to pass along the small

measure of wisdom that learning the hard way gave us, and to give them all the encouragement and moral support that we can."

"Don't sell that last item short," he warned—"it can make or break the man who's just coming in."

The name "salesman" is a word with a bad smell, Mr. Vining said, and recent surveys by reliable concerns show that the number of men in the armed forces interested in a selling job isn't enough to reach pre-war levels, much less measure up to the postwar selling assignment we can already see from here.

"People hear the word 'salesman' and instinctively they duck," he stated. "And we can thank ourselves for that state of affairs."

"How much can you expect of a man when you hand him a catalog and tell him to take it from there? How much good is he going to do your firm?"

"And you know what happened when a good man would come along and sell refrigerators in spite of everything. We cut down the size of his commission!"

The returning veteran from this war will find his best chance with the dealer who wants a small picked crew. The dealer who will try to find the best man for the job is playing fair with both sides, Mr. Vining pointed out.

Look into each man's experience, we urged. Find out what he likes to do most, on the job and off. Train

Sam's Back In the Game



V. E. "SAM" VINING

Who has returned to the major appliance field with Westinghouse. Veterans in the business know "Sam" as one of the most colorful exponents of specialty selling, and longtime readers of the News will recognize him as the author of "Sam's Selling Slants."

him, work with him, pay him enough to live on, and then set up the job so that he has a chance to use everything he's learned.

That is also the way to get stinkin' rich in the business, he added.

"I don't mean you big fellows," Mr. Vining volunteered. "If you're stinkin' rich already, this part isn't for you. You can take your hats and go home."

"The man I'm talking to right now is the little dealer, the neighborhood store that sells appliances and bulbs and electrical fixtures."

"I dare you to do this: Take a little time off tomorrow morning and walk over to a block of homes near you, and sit on the steps of the first one, and look at them all."

"Every one of those homes in the next five years is going to buy \$4,000 worth of the electrical supplies and appliances you sell."

"Every major and minor appliance in that house you're looking at is at least five years old now. The question is not 'Are they going to buy?' The question is 'Are they going to buy from you?'

"Multiply \$4,000 by the number of homes in that block. If there are 20 of 'em, it adds up to \$80,000. Is that a market worth working on?"

"I want to bring the returning veteran back into the picture right here. He's the man who can sew up this \$80,000 market for you."

"And here's how he can do it."

"Give him the names of every family in that block. Let him call on them, one by one. He can say he's in the appliance business in the neighborhood. He's calling on people to get acquainted—that veteran's eagle in his buttonhole will tell them where he's been lately—and he'd like to fix any small electrical items that need fixing."

"No charge, of course. And if they want to know how come, he can be honest about it."

"He plans to visit the families in the neighborhood every month and help them keep their short-lived appliances in good repair. Most of those are still hard to get."

"No, there's no profit in it. But if he does a good job, and can tell them where major repairs are needed before equipment breaks down, maybe when the time comes they'll buy their new equipment from his company."

"What if the lady of the house isn't having any today? Let him smile back at her—he's not gonna let a cool reception throw him. Smile—and say 'That's all right, Mrs. Travis. I'll be around again next month.'

"You'll notice he hasn't used that word 'salesman' anywhere in here. You know why. I just thought I'd mention it again," Mr. Vining said.

"Arrange his schedule so that he can do his neighborhood visiting in the morning, with the afternoons free for sales followups, floor time, etc."

"Remember that our returning servicemen are going to come to us for jobs. If our planning is sound, the ones who aren't meant to be salesmen won't have to try, and then fail."

"The ones who would make good salesmen will find a decent chance to, and be able to eat while they're learning."

"The big responsibility here is ours. We aren't working just for ourselves—the war isn't over. We're working for the men who have come from that war, and for those who are still over there, and for the country they are still fighting for."

How League Helps Locally

Mr. Williams, editor of *Electrical World*, was able to give the Institute a comprehensive picture of the electrical market today, and of what it promises to be in another five years.

The great demand for electrical services and appliances is generally recognized, he said. But there is a big difference between desire . . . and decision!

The postwar buying spree isn't going to last very long, he predicted. Prices will be revised upward, but not largely for some time. Deliveries promise to be progressively slower. Designs will be, too—it will be a year or a year and a half before postwar design revisions will begin.

How do these facts affect the electrical industry, Mr. Williams asked. The kilowatt hour has become a dependable economic standard. Kilow-

(Concluded on next page, Col. 1)

TRUCK

Immediate Delivery

Rubber Tired Wheels

9 95

Lots of 12

NOW! "Handee Andy" all purpose tube steel 600 lb. cap. Full size, first quality, not a wartime makeshift.

Light wt., very easy to handle. HT. 44" .14" wide at nose. Curved cross pieces. The only truck we sell. Specializing permits a better truck, and more of them! By mail only at present time. Fully guaranteed. F.O.B. 10 days. Unrated firms cash with order.

Clip this.

The HANDEES CO., Dept. 2547 Bloomington, Ill.

CORDLEY

Electric WATER COOLERS



452 FOURTH AVE., NEW YORK, N.Y.

Specialists on drinking water equipment for 56 years

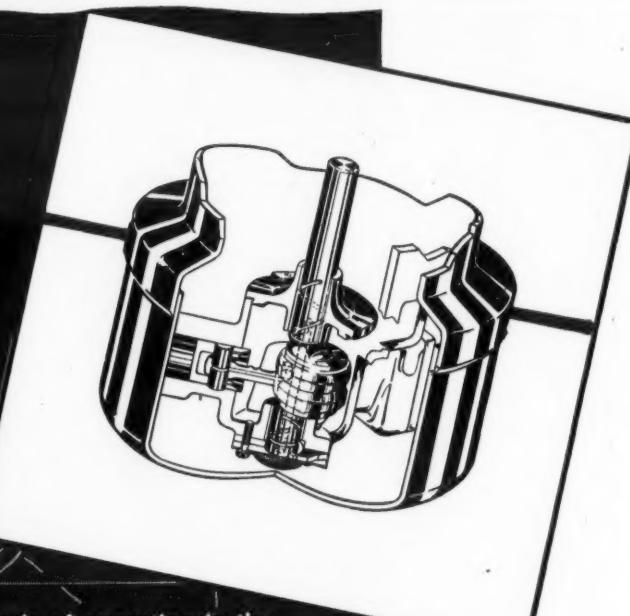
Gilmer BELTS

Gilmer V-Belts are easy to sell, and they stay sold. That's because they fit perfectly, retain their fit, and give dependable service. And there's a Gilmer V-Belt for every air conditioning and refrigeration unit, for they're made from the largest assortment of V-moulds in the world.

Gilmer V-Belts are supplied in carefully chosen assortments that minimize capital investment. Stock rugged, long-lived, efficient Gilmer V-Belts. Get in touch with your jobber today.

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LOOK HERE
for POSITIVE LUBRICATION
An Exclusive Feature
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Universal Cooler
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Refrigeration Units



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Additional
UNIVERSAL
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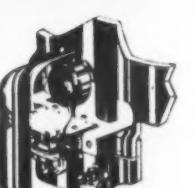
PHOSPHOR BRONZE
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UNIVERSAL COOLER
WE SELL TO MANUFACTURERS ONLY

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922
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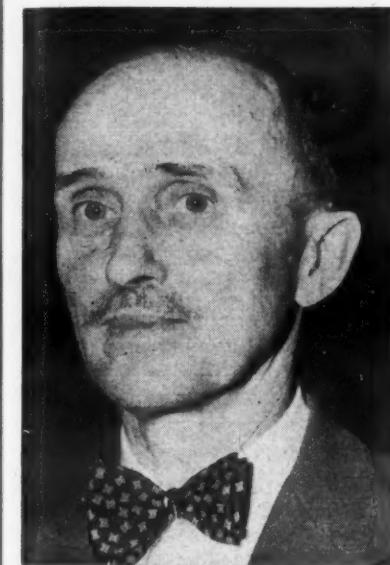
Waddell To Direct Boston Institute

(Concluded from preceding page) watt hour sales for the country and national income describe almost duplicate curves on a graph, he pointed out.

The electrical industry has, for instance, the job of relighting America in the next 10 years, Mr. Williams stated. Of America's homes today, 70% are inadequately lighted, and 75% of its factories.

Better safety in the streets of our cities, better education in our schools, more sales in our stores—all these need better lighting. Homes especially need adequate wiring—millions of homes, and thousands of old office buildings.

Farms alone offer a tremendous market, he added. Before the war, \$69 per farm building was the average figure for electrical equipment needed. The figure today is probably nearer \$89.



JOHN G. WADDELL

Managing director of the newly formed Electric Institute of Boston.

And local dealers can expect good stiff competition from gas appliances, he warned. "Before the war we thought we were pretty well out in front. We've been too busy competing between ourselves. But look around today. How many homes have electric hot water heaters? How many have electric furnaces?

"Our own competition has been holding us back. We need top salesmen, men with vision. We should train them ourselves, within our own organization.

"In an effective electrical league," he concluded, "you'll find all of the five groups working together—contractors, manufacturers, distributors, dealers, utilities. The feeling of interdependence must be a conscious one. No league gets very far without active cooperation within.

"An active league parallels the activity of the community it lives in. Your community is your market. When you promote its growth, you grow too."

Officers of New Group

The conference was officially opened by Thomas H. Carens, vice president of the Institute and of the Boston Edison Co.

He brought to those present the personal regrets of Thomas S. Knight, president of the Institute and a vice president of General Electric Co., who was to have opened this first major activity of the association. Illness had made this impossible.

Present with Mr. Carens, however, were the Institute's other three major officers: Philip W. Gaston, secretary, representing the contractors division in the association. James A. Galvin, assistant secretary, a member of the utilities division. And Ralph E. DeLoid, treasurer, representing the wholesalers.

Also present was the Institute's executive officer, John G. Waddell, managing director.

Mr. Waddell's experience in the industry had been both long and extensive, Mr. Carens related in introducing him. He came to the Institute from serving with the War Production Board, where his work with the Radio and Radar division had kept him in constant contact with leading electrical men throughout New England.

Before the war he headed the General Equipment Co. of Boston,

and before that served with the Wetmore-Savage division of Wesco, with G-E, and with Buffalo's Robertson-Cataract Co. His special field has been electrical installations in New England's textile mills.

Mr. Waddell spoke very briefly of the Institute's aims and purposes. The need for a strong trade association representing all divisions of the electrical industry has been felt in Boston for some time, he said.

The inclusion in the Institute's organization of special divisions for each branch of the industry has had much to do, he believed, with its large opening membership. The number has already passed 300.

Under this plan, specific problems of each group are considered by representatives of that group.

Most of the larger concerns in the Boston area already are active members, but the Institute's greatest service would be to the small business firms. The more representative its membership, the more such an association is able to do for all its members, Mr. Waddell said.

The Institute's headquarters are at 1054 Little Building, 80 Boylston St., Boston 16.

First Delivery of Norge Ranges Made From New Plant at Effingham, Ill.

DETROIT — First deliveries of Norge ranges from the company's recently acquired plant in Effingham, Ill., soon will be made to distributors, it was announced by M. G. O'Hara, vice president and general sales manager of the Norge division of Borg-Warner Corp.

Initial limited flow of the products from this factory started in mid-September when the first Norge range delivered to the trade was turned over to the Effingham Norge dealer at special ceremonies.

As the range rolled off the end of the assembly line in the new factory, W. M. Davis, Norge manager of gas range sales, presented it to the company's area distributor, M. B. Lasky, president of Mayflower Sales Co., St. Louis, Kansas City, and Wichita. Mr. Lasky then passed it on to T. R. Jaycox, manager of H. L. Dust & Sons, Effingham dealer. Adorned with a chromium-plated plaque commemorating the event, it

was placed on display in the Dust showrooms.

In making the announcement, Mr. O'Hara stressed the point that while production is increasing daily it probably will remain small for some time as a result of continuing reconversion activities in the plant. "However," he stated, "we are making every effort to boost output just as rapidly as possible. Our aim is to provide distributors with adequate quantities for full dealer display at the earliest opportunity."

He said the company had been confronted with many problems in converting the plant to range manufacture—transferring machinery from Muskegon, Mich., former site of production, remodeling the factory, and training new employees. Presently, heavy metal stamping and forming presses are being installed, and completion of this phase of conversion will mark complete transfer of range output at Effingham.

Brock Appliance Chief For Carson Pirie Store

CHICAGO — Appointment of Lawrence M. Brock as manager of the new home appliance division of Carson Pirie Scott & Co. here was announced recently.

Before joining this firm, Mr. Brock spent 10 years with the John Schillito Co. of Cincinnati, and prior to that was in the hardware business at Loveland, Ohio.

Carson Pirie Scott also announced that its new home appliance department will occupy about 12,000 sq. ft. of floor space in the store with all display windows on State St. and Wabash Ave. devoted to display.

New Pomona, California, Firm

POMONA, Calif.—Cruse's Home Supplies is the firm name under which Theron Luver Cruse and Karmelita V. Cruse have published a certificate that they are conducting an electrical appliance business at 1150 N. Garey Ave. here.

"Greatest Product Identification Program in Our Industry!"

BENDIX Home Appliances, Inc.

3300 WEST SAMPLE STREET · SOUTH BEND 24, INDIANA

AN OPEN LETTER ON ADVERTISING TO OUR DEALERS:

Congratulations! You have nearly completed the greatest product identification program ever staged in our industry.

Thousands of large outdoor neon signs ... the largest in our industry ... will identify your stores soon, from coast to coast.

More thousands of window neon signs will identify your windows.

And more thousands of floor displays will enable you to present the BENDIX property to the public.

So ... on the outside of your stores, in the windows, and on your showroom floors, you and the BENDIX automatic Home Laundry are teamed up for success.

But the great product identification job is not all you have done.

Because you believe in the great sales potential of the BENDIX automatic Home Laundry and of the new BENDIX automatic Home Ironer, you have been ordering eight times as much sales promotional material, in dollars, as ever before in our history.

For instance, although most of you had never before used imprinted book matches, nevertheless, in one year, you became the largest user of these in the world. Yet in doing so, you did not overlook, or slight, any other important sales promotional activity.

Congratulations on being the alert and aggressive dealers which you are ... the best in the entire industry.

You're on a winning team ... and you know it.

Cordially yours,

W. F. Finnie
Director of Advertising

More power to you,
W. F. Finnie
Sales Manager

BENDIX automatic Home Laundry

Bendix Home Appliances, Inc., South Bend, Indiana...Pioneers and Perfectors of the automatic "Washer"

OPA Pricing Policy Focuses Attention On Postwar Role of Specialty Salesmen

At Least 100,000 Appliance Salesmen Needed; Those Who Went Into War Work Want to Return

By Gerald Eldridge Stedman

Whatever happens before this article is published, the government's attitude as to cost absorption in retail reconversion pricing of consumer durable goods certainly struck a sour note. It indicates a woeful ignorance of the distributive function. It shows that there exists no proper appreciation in high places for the productive contribution which the retail salesman makes to economics . . . and by economics, I mean the means and methods of living well. It fails to recognize retailing facts.

Generally speaking, home appliances are not impulse or demand

merchandise and never will be. They are "hard-to-sell" products that require the instrument and energy of personal salesmanship of specialized, direct, and outside selling nature. They depend for the actual buying action upon personal education and persuasion.

Such salesmanship is as vital, essential, and productive as that of the shop worker and engineer who builds the product. The manufacture of the customer must always preface the continued ability profitably to produce the goods. Thus the salesman has every right to expect a guar-

anteed income as certainly as has the shop worker.

There are certain products of greater buying magnetism than others, such as automobiles and radios. There are others, even more essential but less magnetic, that will be put off. With time payment terms still restrictive and with restraining influences around the use of war bonds as instruments of purchase, since if there is widespread dumping of these, they will have to be refinanced or their values will drop; the average family simply hasn't the funds or buying ability to realize its total desires.

BUYER'S MARKET FOR SOME

Thus, though being a seller's market for some products ranking high in elective preference, it will be in effect a buyer's market for others for the time being. To say that sales organizations can be eliminated for such manufacturers is to say that they should close down, not attempt to reconvert until the period of gradualness in consumer restocking reaches them.

The only way that all manufacturers of every category can freely compete is by maintaining sales organization. The persuasive, educational, specialized, direct salesman of durable merchandise, such as home appliances, can reach out to the average family, show it the wisdom of setting one product before another in its election. Thus all will be given

the chance to develop that volume upon which lower price depends.

How many retail salesmen do the appliance industries need and of what type? My "guesstimate" is that the total market needs 100,000 appliance salesmen. Above that, the sky is the limit.

If you add up the retail prices thus: range, \$160; automatic water heater, \$75; mechanical refrigerator, \$150; radio, \$50; vacuum cleaner, \$50; ironer, \$75; washer, \$75; dishwasher, \$200; laundry dryer, \$150; freezer, \$175; small appliances in total, \$40 as being what the average family should have, this totals \$1,200 per home as a rational potential target.

Presuming there are 34,000,000 homes of which 40% are aspiring enough to want such a living standard, you come to a potential of 13,600,000 homes in the market. Presuming that 70% of these either have never owned such appliances or find their ownership in such run down condition or to be so outmoded as to be an expense to continue to own, there is a rational potential of \$1,200 x 70% x 13,600,000 or a dollar appliance volume potential of \$11,424,000,000.

FIVE-YEAR PROGRAM

Assuming that 20% of this potential could be activated each year, taking five years to accomplish the whole and developing a turn by that means that could permanently support the salesman, assuming he could activate a 20% replacement each year after the initial five years, the 1946 potential would be around \$2,705,000,000 which is not far from out of line, considering the estimates of the automotive industry is using.

Now, to accomplish this actually, assuming the commission scale I hereafter detail will require a yearly expectancy of \$25,000 per salesman from 108,000 men.

Of course, if you are supposing that appliance salesmen will be picked, trained, supervised, operated, and paid as they have been in the past, my guess is that 15 times as many will be needed or closer to 1,500,000.

The assumption of the philosophy of compensation I shall suggest herein, placing a part of the actual load on the merchant rather than to have the salesman bear it all as has been usual in former times, depends upon placing the emphasis upon talent rather than numbers. It involves *methods engineering* as shrewd, within the psychological and human limits of the immaterial considerations which involve it, as the methods engineering of the production flow within any plant.

SOLDIERS' ATTITUDE

What type of salesman? I do not think appliance salesmen will be largely found among the ranks of returning soldiers. I have patiently and persistently interviewed two salesmen each day since Jan. 18, 1944, having now talked with 911 service men of all types and scattered all over the country from St. Louis, Kansas City, and Tulsa to Dallas and Houston then on to Denver and Los Angeles, further up the coast at San Francisco and Seattle and back to the middle west of Chicago, Detroit, and Evansville as well as in the south of Chattanooga, Atlanta, and Knoxville along with the boys returning home to this little Smoky Mountain town of Gatlinburg, Tenn., where I have my permanent home and study. I doubt

whether anyone has made such a broad survey of the attitude and intent of the war veteran.

The great body of findings of this study passes the bounds of this article. But two points are significant. Only 8% of these men in the armed forces declared any interest in selling as a life pursuit and of this number, only 1/2% in any way mentioned appliances.

A second finding, weird as it may seem, is that the average earning expectancy stated by these 911 returned soldiers when they re-enter civilian life was \$61 per week, irrespective of having no experience and little education. They think they have deserved it. They believe others have got it while they have been away. They want to get married and figure they will need that amount.

WHAT THEY WANT

They do not expect to have to climb up to it. They want it right now, each week and on the barrel head. And 87% of them report that they expect to work eight hours or less each day. So that lets them out as good timber for appliance salesmen.

Who then? This brings me to the main body of fact arising from over a year's research among 601 former salesmen in 18 West Coast and Midwest war plants. It all came about because in the fall of 1943, I addressed a letter to a thousand star salesmen of my acquaintance, trying to find out what had happened to them as a result of the war. They were all over 40 years old. Of those returning the card I enclosed, 82% had gone into some form of factory war work. I was curious, therefore, to ascertain their opinions of factory work as compared with selling.

Though I have long written on marketing subjects, which was the reason why I knew so many salesmen to write to, the war shifted my endeavors to technical writing and I found myself the widest-appearing industrial writer in the country in 1944. I organized a 12,000 mile trip to 25 cities west of the Mississippi. Writing for 32 magazines, having the full support of the War Department, I was in 187 war plants that year and the personnel departments of some of them gave me lists of former salesmen with permission to interview them at machine side or in plant where ever they were. Thus this research among these former salesmen which has been more ambitious than any other and which accordingly, has attracted considerable attention.

FORMER SALES MEN SHOW GREAT INTEREST

Of the 601 former salesmen interviewed, 379 of them declared as one of the six reasons why they would leave the factory and go back into selling at war's end, that they felt it offered them a greater chance to earn. A preference of 76% was certainly astonishing. Their average age was 43 years, 4 months. Better than 94% were married. The average number of children was 1.8. I found their factory employment to be split up:

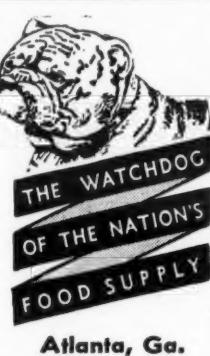
	Average Number	Weekly Percent	Pay
Machine operators	278	46	\$68.7
Non-Productive such as inspection	210	35	63.5
Supervisors or leadmen	113	19	76.1

I worked from a check sheet in (Concluded on next page)

MECHANICAL REFRIGERATION PRODUCTS

Humi-Temp Forced Convection Units—Patented CROSS-FIN COILS—Bare Tube Coils—Zinc Fused Steel Plate Coils—Disseminator Fans—Heat Exchangers—Evaporative Condensers—Instantaneous Water Coolers

LARKIN COILS, 519 Memorial Dr. S.E.



Atlanta, Ga.

"Pin Point" Cold Control

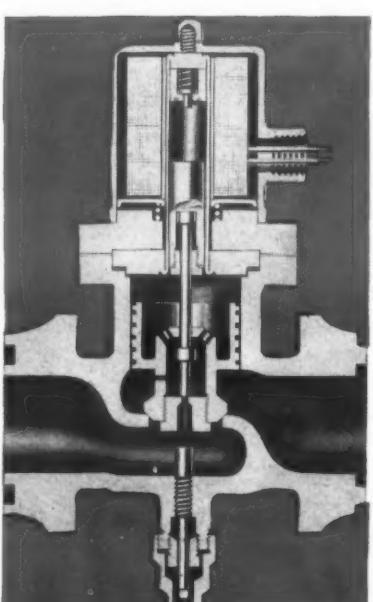
Instant-acting Alco Solenoid Valves control refrigerant flow with "pin point" accuracy.

They are electrically operated by the temperature of the medium to be cooled and respond instantly.

Immune to heat, cold, moisture or current variations.

Rugged, corrosion-proof construction • Waterproof coils • Positive closing • For complete application data write for our Solenoid bulletin.

ALCO SOLENOID VALVES



ALCO VALVE CO.
853 KINGSLAND AVE. • ST. LOUIS 5, MO.

Designers and Manufacturers of Thermostatic Expansion Valves; Pressure Regulating Valves; Solenoid Valves; Float Valves; Float Switches.

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FOR SALE

Licensing basis only

The coldest and fastest cooling beverage coolers ever created—both dry and wet types—also adaptable to frozen food application. Over a hundred of these have been field tested in continuous service for four and a half years. These coolers will obsolete all present type coolers. The soft drink industry will use thousands per year.

You must be large enough to guarantee several thousand minimum production yearly.

Pictures of the finished coolers and the patent numbers will be furnished on request.

Write Box Number 1816, Air Conditioning & Refrigeration News.

War Wages May Alter Compensation Plans

(Concluded from preceding page)

my interviews, averaging 15 minutes with each man, asking easily answered questions, attempting to explore everything pertinent without disrupting their shop work too much. I found that their average aim, as they went back into selling, was \$75 per week compared with the earnings shown above.

They showed no hesitancy in assenting that they expected to maintain an average weekly dollar volume achievement of \$450 and predicated their compensation desires upon it. Compared to any past performance in the appliance fields, such achievement expectancy is very high. The important thing is that they show they will raise their sights when freed from subsistence fears, when given right support and proper incentive.

SALESMEN'S NEEDS

I spent considerable time tearing down this \$75 per week into what it meant in real wages to them. Using a check sheet that stated a number of monthly figures for the common elements of family expenditure, I asked each to state that which best fitted his situation. From it, I found this average monthly family expenditure:

	\$ 90
Housing, including coal, light, and telephone	48
Automobile, including payment, expense, and repair	45
Savings	15
Personal, including liquor, beer, ice cream sodas, etc.	30
Clothing, for the family	30
Recreation, society, health, and vacation	16
Taxes	15
Education, including school books, magazines	6
Civil and religious	5
Total monthly average expense per salesman's family	\$300

There is certainly nothing wrong with this estimate. It requires close living and excellent management. And it figures up to about \$75 per week as essential income. There isn't an item in the above that is extravagant. If anything, several items should be increased. How, for example, are they going to buy home appliances from a \$15 per month saving?

APPLIANCE PLANS

How could I expect to sell an automobile, if I didn't own and drive one? If any salesman is to sell appliances with maximum success, he ought to own and use what he is selling. These former salesmen know that. I found that their own desire to own appliances was of this nature: ranges, 42%; automatic water heaters, 18%; refrigerator, 41%; radio, 65%; vacuum cleaner, 50%; ironer,

10 hour days and four hours on Saturday) the merchant would be paying the salesmen under these plans 64 cents per hour at \$35 per week, 54 cents at \$30, and 45 cents at \$25. Yet these salesmen show a dominant preference for the scale that represents the least cash layout to the merchant, though it means the least hourly wage assurance to them!

That totals about \$2,000 of top durable desires that they would like to satisfy pronto, not five years from now. So their ambition of \$75 per week is justified, conservative, and sound. After all, an effective salesman is a leading, inspired, intelligent, talented mind. If anything, he must be surrounded with the better than ordinary.

How to reach this earning figure? They certainly will refuse to be kidded, footballed, or gyped when they go back. But their attitude is very, very fair. They want to be guaranteed subsistence and to be provided with the incentive and means to work the rest of their expected earnings out for themselves.

Compared with their factory experience, they are sure they can do it if given the cooperation required. Factory work with its noise, routine, standard pattern, repetitive monotony, lack of individual expression is definitely limiting to the spirit and personality of the true salesman. Freed from these limiting shackles, these men will return to selling with a new verve and earnestness; better salesmen too because of the shop experience.

Asked to check the compensation plan they most preferred, these former salesmen declared:

From	Number	Percentage
Straight salary	53	10
Drawing account	32	6
Drawing account & Commission	42	7.7
Salary & Commission	346	65
Straight Commission	60	11.3

Of the 346 who showed dominant favor for salary and commission, I queried more sharply to find their preferences to be:

From	Number	Percentage
\$35 per week and 5% Commission	92	22
\$30 and 8%	147	35
\$25 and 10%	178	43

Study these tables of preference, and note how sound and fair they are. These former salesmen want only to be guaranteed subsistence. They will fight the rest of their earning desire out for themselves.

Based upon their expectancy of \$450 per week sales volume, on which they elect to make their calculations and risk their future, the direct sales cost to the merchant and which he cannot escape is only 7.8% at the \$35 weekly guaranteed salary, 6.7% at \$30, and 5.5% at the \$25 weekly level.

In real risk, looking at it from another angle and assuming that an average week's effort of an appliance salesman represents 54 hours (five

worker, the government, sales, and general management, all to realize the almighty importance of the retail salesmen and cheerfully to see that he is properly rewarded with a guaranteed subsistence and an equitable share of the sales dollar. He performs the most necessary of all services.

The amount which the government is presently suggesting can be added to factory costs, but which distribution must absorb is about what should be added in addition to care for the burden of just subsistence compensation for the salesman.

In other words, the 5.2% increase in the washing machine example is about the additional cost which the merchant must assume under the \$25 per week sales salary plan. If he has to absorb 5.2%, representing largely the increased cost of shop labor to the manufacturer, he should also be willing just as fairly to be asked to absorb 5.5% in addition to indemnify the salesman's existence. Otherwise, the government's insistence is class legislation.

But if the merchant does absorb

both, at the narrow margins under which he operates and with newer and tougher inter-industrial competition, he will be bankrupt. The net of the entire government reasoning is that were such a program to be instituted and endure, it could only lead to the utter dereliction of our durable distribution and would throw us into a system of statism.

Further, if these salesmen are not to be granted a fit chance to earn, the only other place for them is to go back into factory work. This could only be extended under a system of communism or statism.

Salesmen must be employed in greater efforts than ever before. They must be assured subsistence compensation to remove any fears and doubts that will frustrate the full enthusiasm for their high calling. They must be backed up with methods engineering to assure that the risks they personally take in the outlay of intelligent effort and persuasion will not be in vain. And of this essential type of *methods engineering*, I shall have more to say in the following two articles.

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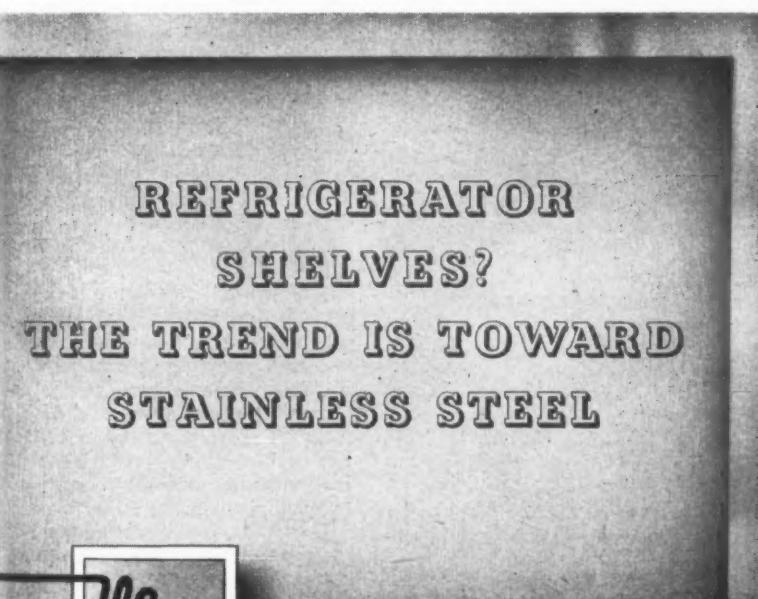
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Specialty Appliance Distributors Tell OPA Cost Absorption Would Kill Sales Effort

WASHINGTON, D. C.—Specialty appliance distributors, presenting their arguments for the retention of prewar profit margins before the OPA on Sept. 19, presented irrefutable facts in rebuttal to the OPA contention that their costs had gone down while volume was increasing so that they could help absorb any price increases that might be given to the manufacturer.

The distributors bluntly urged that prewar distributor margins be maintained, and that the OPA approve increased retail prices so that retailers will be able to undertake the specialty selling activities necessary to the spurring of sales.

Speaking for the distributors were E. B. Ingraham, president of Times Appliance Co., Inc., New York City; George F. Kindley, vice president of the Edgar Morris Sales Co. in Washington; and Raymond Rosen of Raymond Rosen & Co., Philadelphia. Mr. Ingraham submitted the "facts and figures" to break down the validity of the OPA price absorption policy as it might apply to the appliance distributor. Said this statement in part:

Specialty electrical products mean those products, which by reason of their specialized nature and relatively high unit prices, have to be sold through the dealer to the consuming public by intensive and specialized methods. The extent to which the electrical specialty product distribu-

tor has to use education, demonstration, promotional personnel, promotional material, and advertising, is indicated by the 1939 Census of Distribution figures, viz.:

Electrical Wholesalers (for those reporting analyzed expenses)	Training, Demonstration, Promotion, Selling Expense		
	% to Sales	% to Total Sales	% Selling Expense
Refrigerators and other Specialty Appliances	7.6%	45%	
Radios and Equipment	6.7	37	
Wiring Supplies and Construction Materials	4.4	27	

According to industry figures the first mentioned group of electrical specialty appliances represented the following approximate sales at list at retail values:

Millions	1939	1940	1941	1942	1943*	1944*	1945*
	\$548	664	925	212	70	32	11 (based on first 6 months)
							Industry total estimate based on limited sample figures.

It will be seen from the figures above that by the discontinuance of the manufacture of these electrical specialty appliances under war restrictions, the normal civilian business was eliminated.

As will be seen from the figures above, the electrical specialty appliance wholesaling business is not among those to which the—"war has brought a vastly increased volume

of business with reductions in cost along with increases!" The OPA over-all figures given on page 8 in their booklet—"Price Control, Costs and Business Profits"—for the increase in average hourly straight time pay has also been accompanied by long overtime hours of work with premium pay on the part of his remaining skeleton organization. Such conditions of work are not conducive to an increased hourly out-put of clerical, warehouse, and servicing work.

The recent study by National Electrical Wholesalers Association based on a questionnaire answered by representative Appliance Division members indicated the following percentage increases in average hourly straight time rates:

	% Increase over December, 1941, in Average Hourly Straight Time Rates		
	Actual June, 1945	Estimated After V-J Day	
		Officers and Department Heads	16.8
Office Employees	29.6		26.9
Warehouse and Trucking	31.5	27.2	
Servicing Department	25.1	27.3	

*Note: Relatively high due to reduced staff and retention of higher paid key employees.

The above figures demonstrate that the percentage increases in the present and near future average hourly straight time rates for appliance wholesalers are not out of line with those for industry as a whole.

The OPA booklet states that "in some cases this has resulted in increased labor cost per unit of pro-

duction—in other cases increase in labor productivity has offset wage rate increase wholly or in part." This statement applies principally to manufacturing and raw material production. In the case of the electrical specialty appliance distributor, the increase in average hourly straight time pay has also been accompanied by long overtime hours of work with premium pay on the part of his remaining skeleton organization. Such conditions of work are not conducive to an increased hourly out-put of clerical, warehouse, and servicing work.

Among the new and lower graded employees there is necessarily less speed and accuracy than among experienced employees. Their work output is not commensurate with their rates of pay. For instance, an inexperienced repairman may have to bring into the repair shop a heavy appliance; whereas, an experienced man could have analyzed the trouble and repaired it on the premises.

On page 10 of the OPA booklet, appears the statement—"offsetting the increases in wage rates and largely increased sale volume and material prices are decreases in other business costs." The figures given on page 11 as to the decrease in unit overhead costs being caused by increased volume are for manufacturing industries whose sales volume has been greatly benefited by war activity.

Distributors Hit Hard

As shown by the figures previously given, the effect of the war upon the business of electrical specialty distribution has been just the opposite—a greatly decreased sales volume and consequent increased percentage of fixed and other overhead expenses to sales.

On page 12 the statement is made—"in most businesses, manufacturing, wholesaling, and retailing, percentage selling cost has declined due to sharp gain in volume of sales."

As stated before, the decreased volume of sales has had the opposite effect with the electrical specialty appliance distributor. The recent N.E.W.A. study of appliance business referred to above indicates that the percentage of total expense to sales has risen from 14.3% for 1941 to 20.2% estimated average from V-J Day until 1941 sales volume is regained, and 16.9% estimated with a postwar sales volume approximating 1941.

With a normal proportion of educational, demonstration, promotional, and selling expenses to total expenses of approximately 45% for electrical specialty appliance distribution, this expense percent to sales has gone, and will go, up proportionately.

While promotional expense may be at a low point temporarily, the electrical specialty appliance distributor, in the immediate future reconversion period, is faced with the necessity of recruiting and training almost entirely new selling personnel in his own organization, and to a large extent for his franchised dealers. It is often theorized that during the temporary period of scarce merchandise normal selling effort will not be necessary.

They 'Pioneer' Items

Specialty appliances are of a class which, because of unit price and new or special uses, require specialized educational, demonstration, and promotional selling if the consuming public is to buy them in such quantities as to give the expected volume of production employment on which this country's future economic planning is based.

In many cases, with the present shrunken sales volume the total expense per cent to sales is much higher than 20%. The estimated figure for a postwar sales volume approximately 1941 is substantially higher than 1941 because of the continuing increased average hourly straight time wage rates referred to above, and the expenses of the distributor which are estimated in the N.E.W.A. study as follows for the

period immediately following V-J Day:

Increase over
December, 1941

Rental per square foot	26.2%
Contract Trucking rates	29.6
Auto allowances	22
Hotel rooms and meals	32.1
Fuel costs per gallon and per ton	20.3

The OPA statement made on page 13 that—"delivery costs of many wholesalers, retailers, and local manufacturers are down sharply—due to restriction of use of tires and gasoline"—is a temporary condition which will not exist with the resumption of production and sale of consumer goods like specialty appliances on a competitive basis in the reconversion period. In this reconversion period when the industry is on an allocation basis due to scarcity of merchandise, smaller and more frequent deliveries to retailers will increase the delivery expense per cent to sales.

The figures given on page 16 pertaining to manufacturing, wholesaling, and retailing industries with largely increased sale volume and smaller inventories, the latter due to wartime shortages, obviously do not apply to the electrical specialty distributor as to the greatly shrunken sales volume; nor will the present temporary fast inventory turnover be typical of the postwar period when normal deliveries are available.

The figures and charts given on pages 26-30 are for retail trades and wholesale establishments for the most part dealing in unrestricted consumer goods which have had the benefit of the greatly enlarged consumer buying during the war period, contrary to the condition of the electrical specialty appliance distributor whose sales of his regular lines have been almost eliminated by wartime restrictions.

No Increase in Margins

The statement made on page 31 that—"Gross dollar margins actually realized by most wholesale and retail trades have risen sharply during the war"—is not true of the electrical specialty appliance distributor since he previously had no substantial mark-downs and, with his normal merchandise frozen, has had no permitted price increases nor shifts to higher priced lines. Therefore, obviously, realized dollar gross margins have not increased more than operating expenses since the latter are also a higher per cent than normal on the sub-normal sales volume.

It follows that none of the statements made at the top of page 32 apply to the electrical specialty appliance distributor as an industry. Therefore, they cannot logically be included among the trades which the OPA booklet states—"are able to withstand the impact of increases in manufacturers prices when required by the standards described."

The Electrical Specialty Appliance Distributors as an industry, therefore, require margins equal to those provided by the prevailing discounts at the time prices were frozen in March, 1942, or October, 1941, as the case may be. These percentage margins should be maintained in relation to any increased manufacturers billing price to the distributor which OPA may approve in the reconversion period.

Could Retard Prosperity

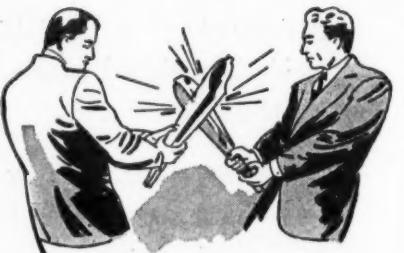
If this and other similar groups of distributors are not allowed margins on which they can operate actively and in a continuing solvent condition in the reconversion and postwar periods there will not be the movement of goods to consumers in quantity sufficient to give the degree of employment necessary to progressive national prosperity.

Postwar employment, according to forward thinking economists, must come largely from the distributing and service trades. Not only will the wartime scale of manufacturing employment obviously decrease, but technological improvements will in-

(Continued on next page, Col. 1)

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Distributors Ask '41 Refrigerator Margins March, 1942, Figures on Other Products

(Concluded from Page 12, Column 5) increase production in relation to man hours needed in manufacturing, so that the increased production necessary to give adequate employment in available manufacturing plants must come from vastly increased selling activities and distributing facilities.

If OPA approves the above required margins, the electrical specialty appliance distributor can continue the historical service of creating a consumer market, sell, warehouse, deliver, service, extend credit, and collect accounts.

The nation's economic form of life will be served in greatly increasing living standards and lowering costs to the consuming public in line with OPA's own duty and responsibility. An example of this contribution is the sale of refrigerators, which during 1929 sold to the consumer from \$300 to \$350, whereas, during 1939 the equivalent model sold for about \$150. Washing machines, ranges, cleaners, radios, and other products followed similar trends of reduced consumer prices as a result of energetic specialty selling.

We, therefore, strongly urge the OPA to establish the March, 1942, distributor margin basis on all appliances except refrigerators and vacuum cleaners, and establish October, 1941, distributor margin basis for refrigerators and vacuum cleaners as the allowable distributor profit margin in per cent of sales. We also strongly urge the OPA approve increased retail prices so that appliance retailers will be able to undertake the specialty selling activities which are of such vital importance to the success of full employment and postwar volume sales.

In the past the public have paid much higher prices for specialty appliances than they will have to pay postwar, even without OPA control. A modest advance in retail prices, needed to provide adequate margins for electrical specialty appliance distributors and retailers, will have no inflationary effect. On the contrary, the purchase of a new and more efficient refrigerator, washer, range, sewing machine, etc., will result in appreciable savings to the owners, through lower operating costs and the economies inherent in their use.

Kindley Explains Functions

Mr. Kindley declared that there were broadly two kinds of wholesale and retail distribution.

"First," he said, "there was distribution from factory through wholesaler and dealer to the consumer or user of commodities or products for which there is a broad and established demand.

"Second, is the creation of a broad public demand and desire to have products."

The latter, Mr. Kindley emphasized, is the primary function of specialty distribution with, of course, the companion function of distributing these specialty products.

Mr. Kindley explained that, "Specialty distributors require a different type of organization from commodity wholesalers. By the very nature of his business, the specialty appliance distributor must confine himself to non-competing lines. He must undertake to carry out elaborate sales promotional plans and campaigns laid out by the manufacturer and must have a corps of trained sales promotion, specialty, advertising, and sales training men constantly operating in the field.

Spark Plug' to Moving Goods

"He must 'spark plug' these specialty selling activities. He must promote, train, guide, and stimulate the dealers' specialty selling activities at every turn. If this is prevented by insufficient margin, and the dealer is also squeezed, he will almost immediately slump back into order taking and be unable to continue specialty sales efforts."

"The time to secure specialty salesmen and to train them is when the demand for appliances exceeds the supply. At this stage of reconversion we have only a short time to do this job; and we must start now with the support of satisfactory margins for both distributors and dealers. Furthermore, he explained that a broad national program directed toward the employment of veterans with technical electrical training and experience is under way."

The important measure to our economy of specialty selling, Mr. Kindley outlined, is the fact that because of that type of selling in the past the prices of these appliances during the years have materially declined. In the support of that contention Mr. Kindley submitted a quantity of factual material from which the following is taken:

	Average Suggested Factory Prices	1931	1938	1941
Electric Refrigerators	\$258.00	\$164.00	\$155.00	
Electric Ranges	163.43	130.23	142.00	
Laundry Equipment	85.00	66.04	78.50	
Electric Ironing Machines	84.00	57.60	55.80	
Radio Receivers (AM Style)	65.79	54.56	34.28	

Mr. Rosen referred to the great part played in the past by the independent electrical dealer in bringing appliances into the consumers' homes in his locality by the means of efficient specialty selling.

Rosen Makes Case for Dealer

The dealers' contribution has been highly important economically from the standpoint of building sales volume and providing employment. These dealers have rendered their local services because services of supply and delivery have been forthcoming from their wholesalers and distributors.

The wholesalers and distributors have taken care of the smaller dealer requirements with their higher costs of service, occasioned by smaller

quantities as well as large dealers whose quantity requirements have been greater and, therefore, could be made and serviced at some saving.

Unless the historic margin can be maintained it was Mr. Rosen's expressed view that it is conceivable that many thousands of independent smaller dealers might be forced out of business because their supplying wholesalers or distributors could not afford to service them.

What Distributor's Asked

Mr. Ingraham concluded with the making of five specific points:

1. As to the OPA report—"Price Control, Costs and Business Profits," it is incompetent, irrelevant, and not pertaining to the case so far as electrical specialty appliance distributors' business is concerned.

2. Chester Bowles recent publicized statement in which he declared salesmen will not be needed in the reconversion period, is not proved by fact. In refutation of that assertion, he asked if OPA really believed that statement and referred to it as making almost as much sense as saying—"We do not need any advertising."

3. OPA has made the observation that the preservation of historic margins creating slight increase of retail prices of electrical appliances is inflationary and dangerous. This statement also is not proved.

Counteracting, Mr. Ingraham ob-

served that average prices for the past 15 years do permit some degree of advance in retail prices of specialty appliances without the danger of inflation.

4. It has been shown that if electrical specialty appliance distributors are not permitted to have their historic margins, that tens of thousands of independent distributors and dealers—small business—will suffer. At the same time, hundreds of thousands of salesmen, many of them veterans will not be put to work. Those results will be exactly the opposite from all that has been intended and OPA will have to take the responsibility for this calamitous condition.

As to those possibilities Mr. Ingraham asked—"Do we want to ruin a large number of small businesses; do we want to prevent tens of thousands of ex-servicemen from securing employment as salesmen, dealers, service men, repairmen, etc.?"

5. The law creating OPA contained the instruction that maximum prices must be generally fair and equitable. In their own interpretation of "Generally fair and equitable" OPA says prices would be so—"so long as they yield an industry or trade, as a whole, at least its peacetime profits."

"Surely," concluded Mr. Ingraham, "you do not wish to go contrary to the law creating OPA and force specialty appliance dealers and distributors to lose money."

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CHICAGO 47, ILLINOIS

Inside Dope

By George F. Taubeneck

(Continued from Page 1)
copy) the other day. It read:

REVEL, INC.

Research Dept.

MEMORANDUM REPORT #999

SUBJECT: THE TURBO

ENCABULATOR

BY: T. K. SHERWOOD

For a number of years now work has been proceeding in order to bring perfection to the crudely conceived idea of a machine that would not only supply inverse reactive current for use in unilateral phase detractors, but would also be capable of automatically synchronizing cardinal grammeters.

Such a machine is the "Turbo Encabulator."

Basically, the only new principle involved is that instead of power being generated by the relative motion of conductors and fluxes, it is produced by the modal interaction of magnetoreluctance and capacitive directance.

The original machine had a base-plate of pre-fabulated amulite, surrounded by a malleable logarithmic casing in such a way that the two spurting bearings were in a direct line with the pentametric fan.

The latter consisted simply of six hydroscopic marzelvanes, so fitted to the ambifacient lunar waneshift that side fumbling was effectively prevented.

The main winding was of the normal lotus-o-delta type placed in

panendermic semi-boloid slots in the stator, every seventh conductor being connected by a non-reversible tremie pipe to the differential girdlespring on the "up" end of the grammeters.

Forty-one manestically spaced grouting brushes were arranged to feed into the rotor sli-stream a mixture of high S-value phenylhydrobenzamine and 5% reminative tetryliodohexamine. Both of these liquids have specific percosities given by $P = 2.5 C_{n6.7}$ where N is the diathetical evolute of retrograde temperature phase disposition and C is Cholmondeley's annular grillage coefficient.

Initially, N was measured with the aid of a metapolar refractive pilometer (for a description of this ingenious instrument, see L. E. Rumpelverstein in "Zeitschrift fur Elektrotechnisch - Donnerblitz" vol. vii), but up to the present date nothing has been found to equal the transcendental hopper dadoscope. (See "Proceedings of the Peruvian Academy of Skatological Sciences," June, 1914).

Electrical engineers will appreciate the difficulty of nubing together a regurgitative purwell and a spurious wannelsprocket.

Indeed, this proved to be a stumbling block to further development until, in 1942, it was found that the use of anhydrous nangling pins enabled a kruptonastic boiling shim to be tankered.

The early attempts to construct a

sufficiently robust spiral decommutator failed largely because of a lack of appreciation of the large quasipieistic stresses in the gremlin studs; the latter were specially designed to hold the roffit bars to the spamshaft.

When, however, it was discovered that wending could be prevented by a simple addition to the living sockets, almost perfect running was secured.

The operating point is maintained as near as possible to the h.f. rem peak by constantly fromaging the bitumogeneous spandrels.

This is a distinct advance on the standard nivelsheave in that no dramcock oil is required after the phase detractors have remised.

Undoubtedly, the turbo-encabulator has now reached a very high level of technical development. It has been successfully used for operating nofer trunnions.

In addition, whenever a barescent skor motion is required, it may be employed in conjunction with a drawn reciprocating dingle arm to reduce sinusoidal depleneration.

Thomas K. Sherwoodn't
PERPETRATOR
Massive Institute of Technonsensity
cc: Director Massachusetts Hospital
for Mental Disease

Three Cheers!

From a careful reading of the booklet "Should Price Control Be Retained?" by Harold G. Moulton and Karl T. Schlotterbeck, published by the revered, impartial Brookings Institution of Washington, D. C., come the following paragraphs:

"Since the postwar price control

program is focused first and foremost upon the control of prices where acute shortages exist, it will be of interest to inquire how important such products are from the standpoint of the cost of living.

"In 1941 expenditures for durable consumer goods, excluding housing, aggregated 6.5 billion dollars. These figures include automobiles, refrigerators, washing machines, vacuum cleaners, electric irons, toasters, radios, clocks and watches, furnaces and heaters, and stoves and ranges.

"This 6.5 billions represented only 8.5% of total consumer expenditures. Even if prices were doubled in these lines, the effect upon the over-all cost of living would not be great.

"It now remains to inquire whether there is any reason for believing that without price control on durable goods prices would skyrocket in these lines. It so happens that this is the very area where industrial price policy operates at its best.

"The automobile industry, for example, has never followed a policy of charging day-by-day or month-by-month all that the traffic could possibly bear. Rather, the automobile companies have followed a low-price policy designed to sustain and expand markets.

"Moreover, this industry is one in which there is intense competition among the major companies; and there is no disposition to invite extensive new competition by pushing prices up during a temporary interval when demands are exceptionally large. The obviously sound policy is to set prices at a level which will sustain demand for several years, rather than to gouge consumers while the opportunity exists.

"It is, of course, perhaps probable, that in the absence of OPA regulation, prices of new cars would have been slightly higher than the 1942 level. But there is no reason to believe that they would have been 50% or 100% or 200% higher.

"We repeat that automobile prices are not made primarily on the basis of a temporary demand and supply situation.

"Of the 6.5 billions of durable consumer goods mentioned above, 80% was produced by 20 companies, and the balance by 25,000 companies.

"Thus in the durable consumer goods industry as a whole, prices are determined primarily by the policies of major companies. That is to say,

the prices set by the big companies determine in the main the prices that can be charged by the little fellows.

"Even though prices of durable goods were not raised at the manufacture level, the question must still be faced whether the distributors could be kept in line without price control at the retail end.

"In the automobile field and in some other lines, the manufacturer can exert considerable pressure upon dealers to stay in line and not spoil the subsequent market.

"There can be little doubt, however, that the temptation will be great to make secret arrangements with insistent customers, especially through the device of small trade-in allowances on used cars or other products. Such practices could not be wholly prevented by the manufacturers.

"Nor, for that matter, could such evasion be prevented by the OPA. Experience during the war with respect to ceilings on used cars, radios and so forth, affords sufficient evidence on this point.

* * *

"The announced policy of requiring distributors to absorb increased costs at the manufacturing level greatly magnifies the problem of price control at the retail end.

"War experience indicates that rationing is essential to the control of retail prices in lines where there are acute shortages.

"But it is apparently recognized that a rationing system for durable consumer goods in peacetime would not be tolerated."

The Monitor Story

From the current issue of "Fortune" come interesting sidelights on a phenomena of our times, the Monitor Equipment Corp. Quote:

"Ted Quinn is perhaps best known to businessmen for his spectacular performance as promoter of the General Electric refrigerator in the last lush years of the 1920's.

"In 1927 G.E. made him head of its new refrigerator department at the infant-prodigy age of 34. The department consisted of one engineer and one model machine. Three years later G.E. refrigerators were grossing an annual \$50 million.

"Quinn is the modulated version of the salesman born. He effected an elaborate distributor setup that

(Concluded on next page)



...APPRECIATION

Remember how it was—Duke was a pup—a pretty big pup at that . . . Every time you had the chance, you'd pat him . . . Maybe rub his ears a little—he liked that. He'd try to lick your face . . . You used to like the way he'd nuzzle that cold wet nose of his against your hand, sorta friendly like . . . He was a good friend—that was his way of showing his appreciation.

APPRECIATION—the one word that should find expression in every American today . . . We at Wolverine have more to appreciate each day . . . The fine people we do business with—Their trust and confidence in us . . . Our own facilities—with which to produce and fabricate seamless copper and brass tubing . . . The skilled people who work "with", not "for" us

... The years of experience behind us to guide us forward.

The list is long—we'd like to go on and on—however, it's best we say it this way . . . To all with whom we've had the pleasure of doing business . . . To those who have been as rushed as we, and yet have found time to return a smile and everyday courtesy . . . To all those who are more than an order number—our friends . . . To these belong our sincere APPRECIATION.



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Calumet & Hecla Consolidated Copper Company
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NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA
VALVES AND FITTINGS SINCE 1904

Inside Dope

By George F. Taubeneck

(Concluded from preceding page)

served G.E. well in marketing home appliances generally. He made a virtue of necessity by calling the dust-catcher superstructure of G.E.'s refrigerator the "Monitor top" (after the revolving turret of the Civil War ironclad) and by advertising it as a virtue.

"Persuasive, affable, humorous, an assiduous reader in philosophy and economics, an eloquent and enthusiastic talker with an Irish flair for anecdote, Quinn was conspicuous among his colleagues for his informality and his interest in sociology.

"As G.E.'s emissary to the TVA in its early days, he toured Tennessee with Harcourt Morgan, Arthur Morgan, David Lilienthal, and Wendell Willkie, haranguing the population on the benefits of electricity. (Out of this excursion came a Quinn-sponsored G.E. special, a cratelike refrigerator that didn't sell.)

"The objective with which Quinn had started out back in 1911 at the age of 18 had been realized many times over.

"He might have followed in the footsteps of his father, Timothy Patrick Quinn, one of the early heroes of the labor movement and a founder of the Knights of Labor. He was tempted to do so. But it seemed to him 'inexcusable that anyone should be as poor as we were.'

"He left home, went to work for the National Lamp Works at Cleveland as a factory hand at \$7 a week, went to law school at night.

"To supplement his subsidized boyhood reading (his father encouraged him with 25-cents-a-book bribes) he paid 50-cent-weekly instalments on Dr. Eliot's 'five foot shelf.'

"With National he did turns as stock clerk, billing clerk, and foreman, and then, by pretending he knew stenography and then learning it, nabbed an opening in the sales department. He had time left over

to get married and get admitted to the Ohio bar. By this time he was 21.

"He stayed on in the lamp business, became successively traveling auditor, credit manager, sales manager, and finally National's assistant general manager. The company had by that time been absorbed by General Electric, and Quinn's dizzy rise with refrigerators was soon to follow. . . .

"Last December Quinn announced the formation of Monitor Equipment Corp., to be served by Quinn as president and to be owned in equal parts by 60 home-appliance distributors.

"The company will sell, under the brand name Monitor, a new high-quality line of appliances complete from refrigerators to steam irons, from toasters to television sets, supplied under contract by a number of medium-sized manufacturers.

"The 60 participants whose combined territories blanket the U. S. include many for whom the word Monitor has pleasant associations: former G.E. distributors Rex Cole of New York, L. H. Bennett of San Francisco, L. H. Driscoll of Charlotte, Beckett Electric of Dallas.

"Quinn confidently predicts a sales volume of more than \$100 million.

"His own hold on the project is insured through 51% stock ownership of T. K. Quinn Co., management consultants, to whom Monitor will pay one-half of 1% of the distributor's purchases for 20 years.

"With life beginning for the nth time at 52, Quinn holds forth at Monitor's unpretentious temporary offices, happily explaining the virtues of his plan. He is imperturbably making a fresh excursion into the big time with no help at all from his long-time patron, G.E."

Distribution Experts Warn Against Wishful Thinking

We hear much of huge consumer savings, a great backlog of deferred consumer demand, and the imminent production of "dream" products. Some surveys purport to give more or less detailed statistics on the millions of radios, refrigerators, automobiles, electric irons, other products, which a buying-minded public is eager to take right off the shelves.

But authorities in the field of distribution, speaking at recent clinics sponsored by the National Association of Manufacturers in major cities, unanimously agree that such an attitude on the part of manufacturers and distributors is dangerous, wishful thinking.

They insist that dynamic, informative bare-handed selling would be required to keep industry running at the high production schedules necessary to support the high-level employment on which depends the continuance of the nation's high standard of living and the maintenance of the American way of life.

The NAM clinics are called to point up—especially for top management in industry—the necessity for aggressive thinking and action on the research angles of distribution as well as on the mechanics of the flow of goods from producer to consumer.

It is axiomatic that American industry can produce all the goods that a peacetime America can consume.

The job before American business now is to answer the question "how much can I sell, where, and how?" and top management must assume leadership in getting the right answers to this distribution problem.

Distribution involves the manner of getting to people those products and services which meet and fill their wants and needs, at minimum prices commensurate with services rendered. It is concerned with placing the maximum of goods and services of optimum quality in the hands of the maximum number of people at minimum cost.

It has been defined as the total of all activities involved in the progression of goods from producer to consumer. It includes warehousing, transportation, advertising, wholesale and retail marketing, and a substantial part of research, engineering, accounting, and financing.

But primarily distribution is concerned with people, and with the

approach to people. Distribution therefore requires of industry that it act on the responses consumers give to the questions:

"What do you want?"
"How do you want it?"
"What price do you want to pay for it?"

The responsibilities of industry extend beyond the mere mechanical processes of manufacturing a product, continuing on through the distribution set-up and into the home or business of the ultimate consumer.

NAM's Committee on Distribution will continue to sponsor pamphlets on techniques of distribution, and will publish the proceedings of each clinic.

Howard E. Blood, of Detroit, president of Norge Division, Borg-Warner Corp., is chairman of the committee.

No System Complete Without a Periscope

According to an Associated Press dispatch, Britain's new House of Commons will have a unique air conditioning system. A control engineer will watch the members through a periscope, and regulate the temperature to keep them comfortable.

The architect, Adrian Gilbert Scott, did not elaborate on the necessity for installing a periscope, nor did he specify how the engineer would be able to tell when the members needed cooling or warming, as the case might be.

Australian Note

Drought conditions in southern

Australia are the most severe in years and if they continue through the present winter, sheep losses may amount to between 15,000,000 and 20,000,000.

Cattle losses also may be heavy, but only a fraction of sheep mortality. This is due to the fact that there is a sheep population of around 120,000,000, and 14,000,000 cattle; also that most cattle are not located in drought areas.

Fodder reserves have never been lower. Government controls will prevent supplies from reaching starving sheep, except registered studs.

As one observer puts it: "Plain brutal fact is that sheep must be left to die so dairy cows can be kept in production and working horses kept on the job, particularly where wheat may be sowed."

Are You Getting Your Share of the Milk-Cooling Business?



Model VCB-HX33
Packaged-Unit

WILSON

SYSTEMS OF MILK COOLING
A TYPE FOR EVERY REQUIREMENT

2. VERTI-COIL MILK COOLER

• Wilson VERTI-COIL Milk-Cooling Cabinet (U.S. Pat.) integrates in its design the tremendous cooling action of the Verti-Coil Prime Surface Plate Coil to provide a positive non-mechanical circulation of the refrigerated water bath. . . . Effectively cools all of the milk, including the hard-to-cool top milk where spoilage starts.

• The Wilson Cabinet is "Life-Tested" for long efficient life.

Thousands of dairymen have bought, thousands more will buy, WILSON MILK COOLERS. A share of this business can be YOURS . . . if there is no Wilson Dealer near you . . . if you have a modern organization . . . write NOW!

WILSON REFRIGERATION INC.
DIVISION WILSON CABINET CO.,
Smyrna, Delaware

A child can open the easy-pull out drawers

Illustrated below, 16 cubic foot FREEZ-ALL; 8 cubic foot FREEZ-ALL; 6 cubic foot Chest Model FREEZ-ALL.



The Original
Drawer Type Food Freezer

Merchandisers who plan to sell home freezers see in

FREEZ-ALL greater possibilities for tremendous volume and profit in the postwar period because

FREEZ-ALL is the original and outstanding exponent

of drawer type freezers . . . the first feature nearly

every future prospect speaks about. FREEZ-ALL

has had a longer period to engineer drawers that

work perfectly . . . and they do—with the greatest

of ease. . . . Write for name of distributor.

FREEZ-ALL

The original drawer type freezer

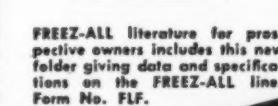
Mfg'd by FREEZ-ALL Division

PORTABLE ELEVATOR MFG. CO.

BLOOMINGTON, ILLINOIS

Quality since 1899

This is the
home food
freezer
we want!
FREEZ-ALL



FREEZ-ALL literature for prospective owners includes this new folder giving data and specifications on the FREEZ-ALL line. Form No. FLF.



**Commercial
REFRIGERATION**
MODERN
• DISPLAY CASES
• COOLERS
• REFRIGERATORS
• HOME FREEZERS
AMANA SOCIETY
AMANA, IOWA

**Cafeteria Type
WATER COOLERS**
FOR MESS HALLS
HOSPITALS
AND PLANTS
PACKAGED
Remote and
Cabinet Models
All Sizes
For all applications
Write for Details
Filtrine MANUFACTURING CO.
53 Lexington Ave.
Brooklyn, N. Y.
For Over 40 Years
HIGH EFFICIENCY

**WAR INDUSTRIES
NEED REFRIGERATION**
The use of refrigeration in industry has been greatly accelerated by the war. In peace time this expansion may logically be expected to continue. Write for literature.
GENERAL REFRIGERATION DIVISION
Yates
American
Machine Co.,
Beloit, Wis.
Lipman
AUTOMATIC REFRIGERATION

Refrigeration Has Multiple Uses In Plant Making Auto and Railroad Shock Absorbers

MONROE, Mich.—Motor vehicle and railroad shock absorbers built in the hottest summer weather now will operate at peak efficiency on the coldest winter days—even in arctic regions where the temperature stays far below zero for months at a time.

This has been made possible by war-born advances in industrial mechanical refrigeration which will have widespread application in giving America a better "peacetime ride" in its new automobiles, trucks, buses, railroad cars, and on its farm tractors, too.

How it has been accomplished in the plant of the Monroe Auto Equipment Co., Monroe, Mich., one of the nation's largest producers of hydraulic shock absorbing devices, is revealed by a survey of new uses of refrigeration in "producing for peace," made by Refrigeration Equipment Manufacturers Association.

Cold tests in recently installed equipment in the Monroe plant cover the company's entire range of hydraulic shock absorbers, now being manufactured at the rate of more than 10,000 a day for all types of transportation equipment. Temperatures as low as -120° F. and controlled to a fraction of a degree are employed.

By determining the degree of stiffness of the shock absorber fluid in various low temperature ranges and then by testing on dynamometers the resistance of the shock absorber valves, a "happy medium" is reached so that the shock absorbers will

operate equally well under all climatic conditions.

It is explained by Monroe officials that the fluid in the shock absorbers becomes stiffer as the temperature drops, and the action of the shock absorbers thus is retarded unless compensated for by proper regulation of the valves.

Equipment for the tests was installed during the production by Monroe of heavy duty hydraulic shock absorbers for tanks, jeeps, trucks, and other wartime equipment, much of it designed for operation either in extremely cold or extremely hot regions. The same equipment now is used for civilian production. A simple twist of a knob now gives any desired temperature down to -120° F.

Not only is this equipment used for testing the two way hydraulic shock absorbers used on passenger cars, trucks, and buses, but it played an important part in the development by Monroe of hydraulic easy-ride seats for both trucks and tractors, and in the new direct action two-way hydraulic shock absorbers for railroad freight cars as well as Pullmans. The truck and tractor seats employ a combination of hydraulic shock absorber and coil spring.

Like many other industries, the Monroe company is making refrigeration equipment serve the dual purpose of testing its products and for treating metal cutting tools. It has been found that "cold treatment"

of tool steels and other metals during peak war production frequently increased tool life as much as 100%. Such treatment usually follows heat treating and produces greater hardness, strength or ductility according to the procedure followed.

Another war-developed application of mechanical refrigeration is proving its usefulness as the automotive industry prepares to swing into mass production. This is the chilling and shrink-fitting of valve inserts in cylinder blocks and wrist pin bushings for pistons. Mechanical cold cabinets with automatic feeding systems are in use near production lines in major automobile plants.

New Executive Staff Is Named by Alco Valve

(Concluded from Page 1)
engineering department. He was elected vice president in 1942.

Mr. Lockwood, secretary-treasurer of the company since 1942, was recently elected a vice president, and now becomes assistant general manager, too.

Mr. Kipp has been prominently identified with the sales department since he joined Alco in 1937, with the exception of the war years, 1942-45, when he served the company in the post of procurement director. Early this year he was re-appointed a divisional sales manager, and now heads the entire sales organization.

Mr. MacDougall joined the firm in 1936 and for the past few years has served as assistant director of engineering. As chief engineer he now becomes head of that department, succeeding Mr. Dube.

Win Promotion at Alco Valve Co.



CHARLES B. LOCKWOOD



ROGER P. KIPP



FRANKLIN M. MACDOUGALL

Eichmann Joins Staff Of George Lewis Co.

PHILADELPHIA—George B. Eichmann recently joined the staff of George C. Lewis, General Electric commercial refrigeration and air conditioning outlet here, reports Lee C. Leslie, sales manager of the company.

Having started his career in the air conditioning and refrigeration field here in 1935, Mr. Eichmann is well known to the architects and engineers.

Redmond Co. Offering Engineering Service

OWOSO, Mich.—"Customer Engineering Service," a means by which Redmond Co., Inc., provides engineering assistance to its customers, is being expanded and heavily emphasized, according to a recent company announcement.

Redmond company, manufacturer of small motors marketed under the trade name, "Micromotors," feels that the experience gained in the production of these motors has made their proper application an exacting science.

Sacramento Valley R.S.E.S. Organization

SACRAMENTO, Calif.—Sacramento Valley Chapter of R.S.E.S. received its charter from W. W. Allison, a member of the national board at a recent meeting held in the Young Ladies' Institute Clubhouse here.

Chapter president is Gerald S. Kennedy, other officers include Wilber Griffin, first vice president; Roy Meissner, second vice president; John Bell of Roseville Placer county, treasurer; William Schaefer, secretary; Al Schoen, sergeant-at-arms; and Mark Bale, education chairman.

Principal speaker was Ray E. Edling who is in charge of the placement of veterans at the WMC. He discussed training and refresher courses offered to veterans under the GI bill.

PROTECT FOOD AGAINST SPOILAGE AND WASTE



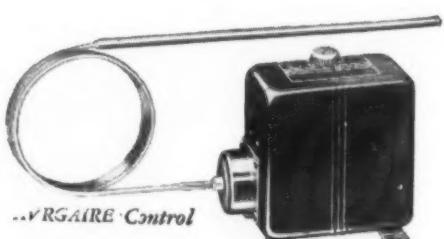
...WITH PENN AVRGAIRES CONTROLS

Designed for commercial "above-freezing" applications, the low-cost, highly efficient AVRGAIRES control provides food supplies with better protection against spoilage and waste.

PENN AVRGAIRES incorporates a single-type temperature bulb which is scientifically applied so that it is influenced by the average temperature of both coil and air. Consequently AVRGAIRES assures extremely close regulation of box temperature without irregular short-cycling of the compressor.

Furthermore, this control automatically defrosts the coil on each operating cycle... when the box load is normal. However, let the box be loaded with warm produce and extra cooling capacity be required... and defrosting will be delayed automatically. In addition, PENN AVRGAIRES maintains uniform humidity and thus reduces dehydration and "sliming" losses to a minimum.

For better protection against spoilage and waste, install AVRGAIRES control. Complete information is available in bulletin 2250... write Penn Electric Switch Co., Goshen, Ind. Export Division: 13 East 40th Street, New York 16, U. S. A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.



PENN

AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

STANDARD
Prime Surface
COLD PLATES
For Maximum
Refrigerating Efficiency



THE STANDARD-DICKERSON
CORPORATION
46-76 Oliver Street • Newark 5, N. J.
STANDARD KNOWS REFRIGERATION

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Rempe Constructs Plant Addition For New Line

CHICAGO—Rempe Co., 340 N. Sacramento Blvd. here, has just announced the completion of a new addition to their factory for the manufacture of a new line of unit blowers for air conditioning and refrigeration, and fin coils for low temperature cooling.

The new blower line is being made in a large range of sizes and for use with all types of refrigerants, including Prestone and Brine.

Manufactured for quick freezing of perishable products, the fin coils are for use in temperatures as low as 40° F. Major user for this type of equipment is the food packing industry.

Subzero Freezing Is Trade School Subject

CHICAGO—Subzero industrial freezing will be among the subjects that veterans and other apprentice refrigeration service men will find in postwar trade school training.

A Deepfreeze Cascade unit that will pull down to 120° below zero F. is now part of the training equipment of Chicago's Utilities Engineering Institute.

The why and how of subzero processing in modern industry was introduced to the school's technicians and students by S. J. Seibert, manager of the industrial division of Deepfreeze Div., Motor Products Corp., which manufactures the unit.

He outlined also the problems that an equipment maker must meet in fabrication, distribution, sales, and service.

The talk and demonstration were given in line with UEI's longterm policy of bringing the men studying refrigeration service work into close contact with manufacturers and their service problems.

Wanted: Engineer with reciprocating refrigeration compressor development experience. Due to our aggressive and extensive postwar plans, we need to augment our present outstanding reciprocating refrigeration development group. Here is a chance for the right man to affiliate with a leading company, in a position that offers broad experience and opportunity under outstanding design leadership. Address replies (marked confidential) to H. L. Laube, Vice President, Engineering Division, Carrier Corporation, Syracuse, New York.

WRITE FOR CATALOG



Do to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.

Bela Deutch Heads Standard Machine Co.

ST. LOUIS—Standard Machine & Mfg. Co. has recently announced the appointment of Bela Deutch to head the company.

Mr. Deutch comes to Standard after a 19-year association with Alco Valve Co. He resigned his position as vice president in charge of production and factory management to join Standard, which will continue its manufacture of refrigeration accessories.

Blossom Way Co. Does Business As McNew's

HAYWARD, Calif.—Mc New's is the new name under which the former Blossom Way Refrigeration Service will do business, announced V. L. Mc New, an executive of the company.

The firm has opened a new store at 831 Castro St. here and installed auxiliary telephone service.

U.S. Airco Retains Davies as Designer

MINNEAPOLIS—Charles Davies, New York City industrial designer, will be retained as consultant on styling and product engineering for the United States Air Conditioning Corp., officials of the firm announced.

Mr. Davies, as former president of the Davies Air Filter Corp., was responsible for the styling of products which included both industrial and domestic appliances.

For United States Air Conditioning Corp. he will do redesigning on established products, as well as styling for new items.

Dew Freeze Appoints Hauk Co. In St. Louis

ST. LOUIS—Dew Freeze Co., manufacturer of frozen food cabinets here, has appointed G. I. Hauk & Co. as local distributor.

Factory output will reach 10,000 per year, believes H. A. Woodworth, head of the firm.



Richard S. Dawson (left) is the newly appointed vice president in charge of sales for Henry Valve Co. Charles V. Gary (right), returning to the company after three years of active duty in the Navy, takes the post of executive vice president and general manager.

Columbus Manager Dies

COLUMBUS, Ohio—Fred A. Turner, Sr., Columbus branch manager of the Morton Show Case Co., suffered a fatal heart attack while at Marion, Ind., on business Sept. 12.

He had been with the company for eight years.

Blue Cold To Freeze Foods

RICHMOND, Va.—Blue Cold, Inc., Salem, Va., has been granted a charter by the State Corporation Commission to operate and maintain freezing and cold storage plants. Maximum capital is \$100,000 and E. W. Senter is president.



25 lb. pail illustrated.

The Ideal Dehydrant for Refrigerants

JAY CEE refrigeration gel is one of the most efficient dehydrating agents. It is especially prepared for dehydration of refrigerants, and may confidently be used for drying Freon, Methyl Chloride, Sulfur Dioxide or any other similar agent. Removes acids, prevents rust or corrosion and is not affected by oil. The special particle size retains its crystalline structure—assuring uniform distribution in the cartridge and complete contact with all pore surface areas.

We offer you this economical 25-lb. container with resealable Easy-Pour spout. Dehydrators can easily be filled from this Easy-Pour container, and resealed to protect unused contents until needed. Special gasketed cover makes Easy-Pour container air-tight when not in use.

There are excellent opportunities for jobbers and distributors to develop profitable business on Jay Cee Silica Gel in a few territories. Write for details.

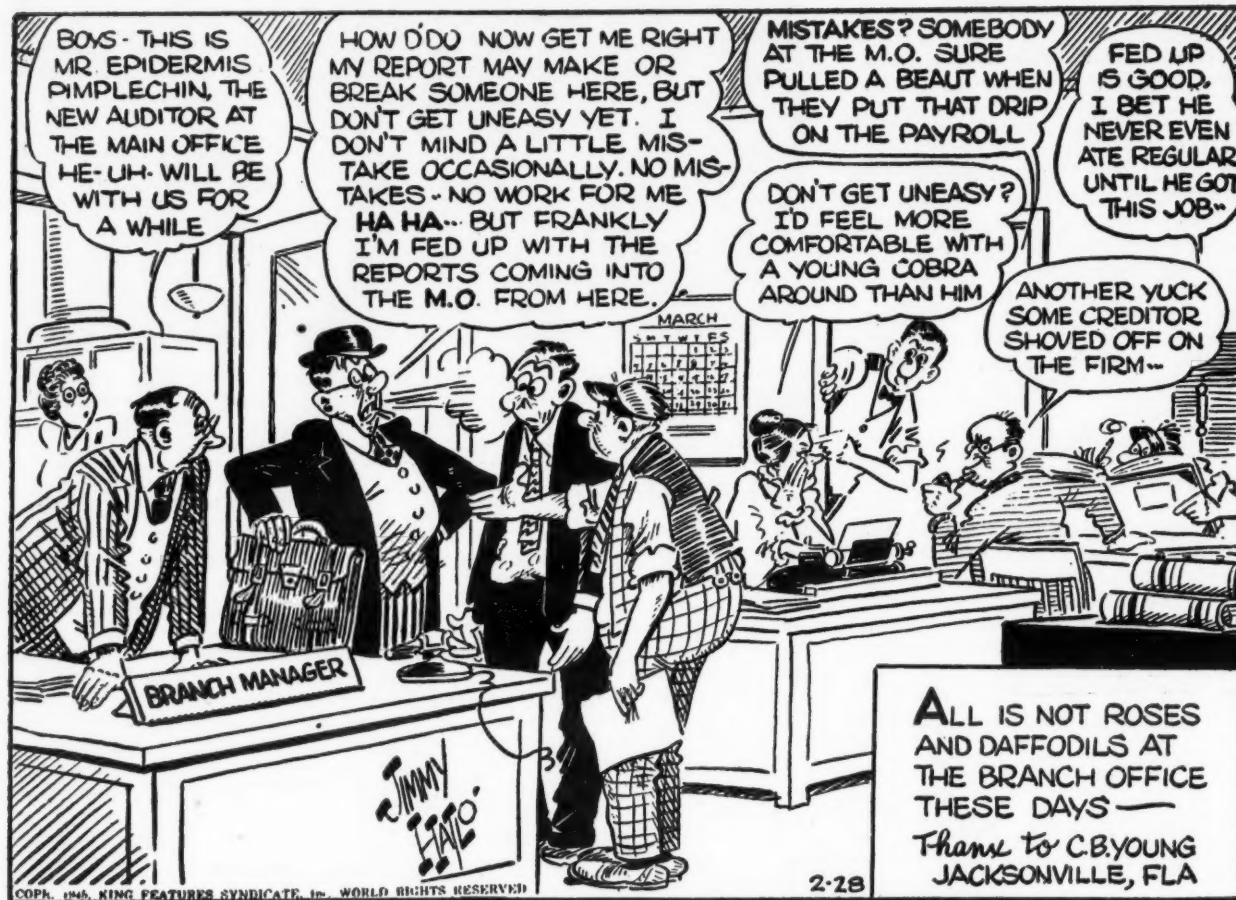
JOLIET CHEMICALS, LTD., INDUSTRY AVENUE, JOLIET, ILLINOIS



SILICA GEL

A superior dehydrant

They'll Do It Every Time By Jimmy Hatlo



2-28

ALL IS NOT ROSES
AND DAFFODILS AT
THE BRANCH OFFICE
THESE DAYS—
THANKS TO C.B. YOUNG
JACKSONVILLE, FLA

Buy and Buy - - More War Bonds

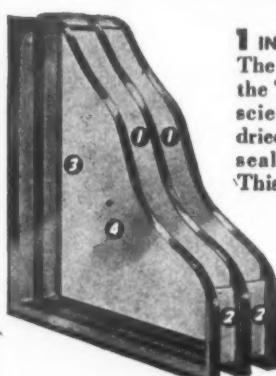
FROSTED CASES MEAN...

**LOST
SALES!**

ELIMINATE FROST OR
CONDENSATION IN YOUR
CASES AND INCREASE
SALES WITH

Thermopane

Libbey • Owens • Ford's Multiple
Glass Insulating Unit

GET THESE 4 ADVANTAGES
OF THERMOPANE

1 INSULATING AIR SPACE. The layer of air inside the Thermopane units is scientifically cleaned, dried and hermetically-sealed at the factory. This sealed-in air gives Thermopane its high insulating efficiency.

2 BONDERMETIC SEAL. This patented, weather-proof, metal-to-glass seal bonds these panes of

glass into one unit to prevent dirt and moisture from entering the air space.

3 CLEAR VISION. The dry air is sealed in with the patented bond to prevent frost or condensation from forming on the inner surfaces of the panes of glass.

4 ONLY TWO SURFACES TO CLEAN. The glass surfaces inside a unit are specially cleaned at the factory... and stay clean!

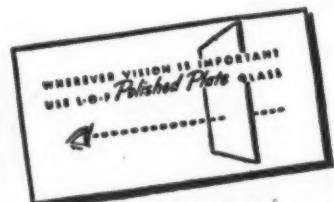
All of the world's armed might can't capture a sale that has been lost because the glass in your frozen food case frosts or is clouded by condensation.

Yet there is a simple and effective way to prevent such lost sales—by glazing your cases with Libbey-Owens-Ford *Thermopane*—the transparent, multiple-glass insulating unit. *Thermopane* is easy to install... comes as a single unit from the factory ready to be installed just like an ordinary pane of glass. Yet the inner surfaces are factory-cleaned—and stay clean. No extra washing required—no extra glass surfaces to collect dirt.

And *Thermopane* carries a five-year warranty when properly installed. So why not be sure of maximum sales from your cases by installing this patented, exclusive Libbey-Owens-Ford product. Complete information on request. Write to Libbey-Owens-Ford Glass Company, 66105 Nicholas Building, Toledo 3, Ohio.



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a Great Name in GLASS



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U. S. Patent
Office:
Est. 1926

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There's Gold In Them
There Hills and Dales

DO NOT overlook rural markets when making your market penetration plans.

Most clearly defined prospects for postwar buying power can be located in rural areas. Here's the situation in a nutshell:

War has skyrocketed farm income, which this year will approximate 21 billions of dollars—which is more than double the income which the nation's farmers could amass during a good peacetime year, and 4½ times the “depression low” which they registered in 1932.

Despite sharply increased expenses, present-day farm net income is the highest on record.

Farmers have also been able to save substantial sums, aided by several years of war prosperity.

The all-time peak of farm income in the United States probably will be reached this year.

A drop in the total sum paid to food producers is definitely in prospect for 1946, because production is placing pressure on prices, and because some statisticians in Washington guessed wrong.

But this does not mean that agricultural income is going into a tailspin.

Farmers are assured a relatively high income until at least Jan. 1, 1948.

Here are the reasons: On six basic commodities—corn, cotton, peanuts, rice, tobacco, and wheat—the government guarantees the farmer a return equal to 90% of parity—92½% for cotton. (Parity is a price which would assure purchasing power equivalent to the 1910-1914 average.)

On a long list of other crops, which are deemed to be important war items, the government must support wartime price levels. This promise may cost the government (meaning all of us taxpayers) at least \$2 billion next year, a sum which would amount to three times the total of such expenditures prewar.

Moreover, the farmer will doubtless always enjoy political pampering, and there is no assurance that wartime support prices will ever be dropped entirely.

Recognizing that the farmers are riding high, and that they will continue to do so for some time, both big and smaller manufacturers of refrigeration equipment are planning greater emphasis on the farm market.

For example, the prescient Westinghouse Electric Corp. has announced the organization of a new department delegated to “go after” the farm electrical appliance market.

Close to three million farms are now using electricity. This startling figure may be doubled when materials for more extensive rural electrification are available.

Westinghouse market analysts predict a two-and-a-half billion-dollar electrical appliance-farm equipment rural market during the first two years after global warfare has ended.

And their 10-year market projection averages 60 million dollars worth of sales annually!

Regardless of what you make or sell, don't fail to explore the possibilities of this lucrative market.

From here, it looks like a gold mine!

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1945,
Business News
Publishing Co.



This Tool Box...

**CARRIES THE TOOLS THAT KEEP THE NATION'S
REFRIGERATING SYSTEMS FUNCTIONING DAY AND NIGHT!**

When your Refrigeration Service Engineer calls to check, repair, or maintain your refrigeration equipment, notice what he carries in his big tool box! Among its contents, you'll usually see two "A-P" Controls — one the "A-P TRAP-DRI"— the system protector that traps dirt and moisture. In the other carton is a dependable "A-P" Expansion Valve.

Good, sound experience backs this widespread acceptance of "A-P" Dependable Refrigeration Controls by Refrigeration Service Engineers. With a heavy work load, and short of experi-

enced help, every service call must count. Because "A-P" Refrigeration Controls are so wholly dependable, service engineers know they can install them and forget them.

AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET MILWAUKEE 10, WISCONSIN
Export Department — 13 East 40th Street, New York 16, New York

All Credit to the outstanding main-
tenance job Refrigeration Service Engineers are
doing today! Count on their continued coopera-
tion — and the always dependable service of
"A-P" Controls.



DEPENDABLE *Refrigerant Valves*

Stocked and Sold by Good Refrigeration Jobbers Everywhere • Recommended and Installed by Leading Refrigeration Service Engineers

What 1,739 Housewives Want In a Refrigerator

	Must have it	Like the idea but not vital	Not interested
More shelf space in upper part of refrigerator—less stooping	25%	49%	11%
More space for tall bottles	46	44	9
Compartment for storing frozen foods	65	24	4
Automatic defrosting system	45	39	6
Adjustable shelves	36	40	10
Moister air in cabinet	26	35	18
Water tank with faucet outside	10	38	34
Motor with less noise	29	35	15
Easy ice cube remover	45	35	7
Bigger vegetable compartment	53	28	7
More ice cube capacity	19	32	28
Automatic temperature control	49	27	6
Odor absorber	54	31	4
Butter conditioner	26	42	16
Meat storage compartment	69	22	7

'American Home' Survey Shows Features Wanted In Household Boxes

NEW YORK CITY—Heading the list of desired features in the post-war refrigerator, according to *The American Home* reader-consumer panel survey among 1,739 housewives, are the following:

A storage compartment for fresh meats, a compartment for storing frozen foods, a device that prevents foods from taking on the odors and flavors of other foods, and a larger compartment for fresh vegetables.

The housewives were asked to check how they felt about these various features for postwar refrigerators, bearing in mind that these features might add somewhat to the cost.

Midwest Will Produce Kitchen Cabinet Line

GALESBURG, Ill.—Plans to manufacture and market a line of "Kitchen-Kraft" cabinets have been revealed by Midwest Mfg. Co. here.

Designs, drawings, tools, and dies of a manufacturer of kitchen cabinets who dropped out of the field during the war were purchased by Midwest sometime ago and will be used for the basis of the new line. Midwest engineers have been making improvements.

Some of the features of the line which will include sink units, base cabinets, utility cabinets, and wall cabinets claimed by the manufacturer are: welded construction, baked lustrous enamel finish, adjustable shelves, insulated doors, "finger tip" control drawers, chrome-plated hardware, and ample toe room.

California Farm Big Market For Appliances, New Hotpoint Models**Wide Variety of Electrical 'Work Savers'**

SAN FRANCISCO—With estimates indicating 99.9% farm electrification in California within three years, scores of new machines, processes, and appliances will help lighten farm drudgery.

A survey of 805,000 Pacific Gas & Electric Co. customers revealed that this cross section of Californians wants to buy 226,000 new radios, 187,000 washing machines, and 62,000 food freezers. More than half this demand, the survey stated, came from rural areas.

Demands will be heavy, also, for electric refrigerators (122,000) and vacuum cleaners (180,000).

Small portable electric motors will be put to work doing such farm chores as shelling corn, grinding feed, washing milk bottles, mixing cement, hulling walnuts, and shaking fruit from trees. At present, California farmers are using a quarter of a million electric motors for such tasks, it was stated.

AIR COOLED HEN HOUSES

Air conditioning for hen houses was tested in the hot Imperial Valley in California. A temperature of 97° was maintained within when it was 109° outside, with the result that hens laid more eggs.

Another electrical device of use on poultry farms is a vacuum cleaner to pick up litter in chicken pens, thereby cutting cleaning time in half.

To kill air-borne germs and reduce mortality among chicks, ultraviolet light is being used experimentally, it

was reported.

Electrical soil sterilization has been attempted with success by vegetable and flower nurseries and seed growers. Electric ovens which keep the soil temperatures up to 180° in a 30-minute application will kill fungus, insects, and most common weed seeds.

Electric milkers are already used by half of California dairies, and a number of them employ electric sterilizing equipment, also.

Listed as indispensable equipment in the big fruit and vegetable packing plants are electrically operated sorting tables, and infra-red heating mechanisms for dehydrating food.

BIG POWER CONSUMPTION

Rural areas of California use more electricity now than all the rest of the farms in America put together, it is said.

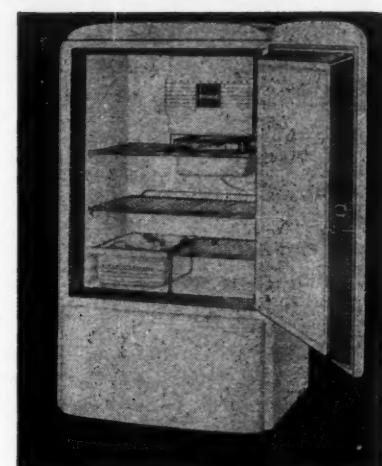
Two factors account for this: a climate that makes farming dependent on irrigation, and low power rates as compared to the average of the nation.

Moreover, this is almost wholly an achievement of private utilities, it is reported.

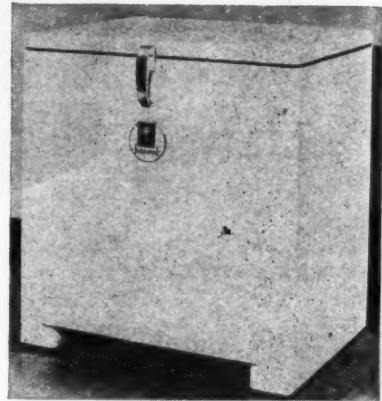
When rural areas reach a saturation point, private firms will have supplied nearly 85% of the farm customers. The government's Rural Electrification Administration (R.E.A.) has barely a toehold in California.

Although California will be the first state to electrify nearly all its farms, some of the others are nearing that goal—New Jersey, and Rhode Island—but most states have a long way to go, the article stated.

Most of the remaining job of electrifying California's 140,000 farms will be done by Pacific Gas & Electric. Biggest share of the potential customers are farmers, but they also include roadside stores and stands, summer homes, small villages, saw mills, packing sheds, etc.



This is the Hotpoint 7-cu. ft. standard Doric model refrigerator. It has a new vacuum sealed unit, has four ice cube trays, a vegetable compartment drawer with glass top, one sliding shelf, and carries a five-year protection plan with one year warranty on the complete refrigerator.



Hotpoint's 4-cu. ft. home freezer. Interior is fitted with baskets for easy handling of food.

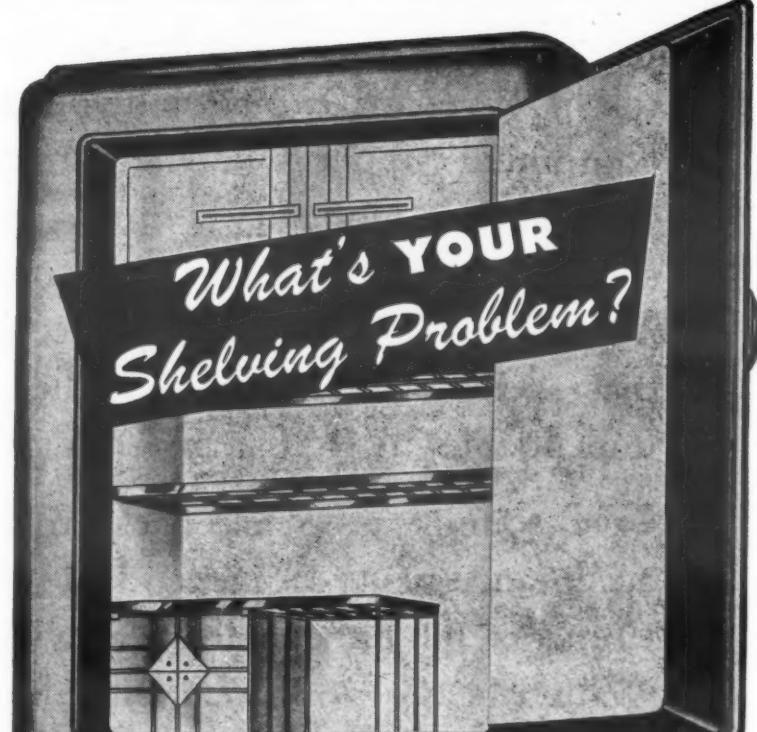
New Distributor For Monitor In Boston

BOSTON—Equipment Distributors Inc., has been established here to handle the Monitor line of major appliances, radios, and televisions in greater Boston and the eastern Massachusetts market.

Officers of the new firm are Alvin C. Zises, president; and Arthur J. Hirsch, general sales manager.

Mr. Zises was formerly a sales executive with Bendix Home Appliances and with Ludwig, Hommel & Co., Pittsburgh appliance and radio distributors.

After resigning a sales management position with the General Electric Co., Mr. Hirsch assumed his duties as general sales manager with the firm.



EXPERIENCE . . . QUALITY . . . SERVICE—that's what you get when you let Union Steel Products work with you on shelving for your post-war models. Our men have had years of experience in design and manufacture . . . our plant has every needed facility to turn out attractive, strong and correctly designed shelves and baskets. Let us suggest ways to turn out better shelving at lower costs. Available only in lots of 1000 and over. Write for our new brochure on Refrigerator Shelving.

UNION STEEL PRODUCTS CO.
531 Berrien St., Albion, Michigan

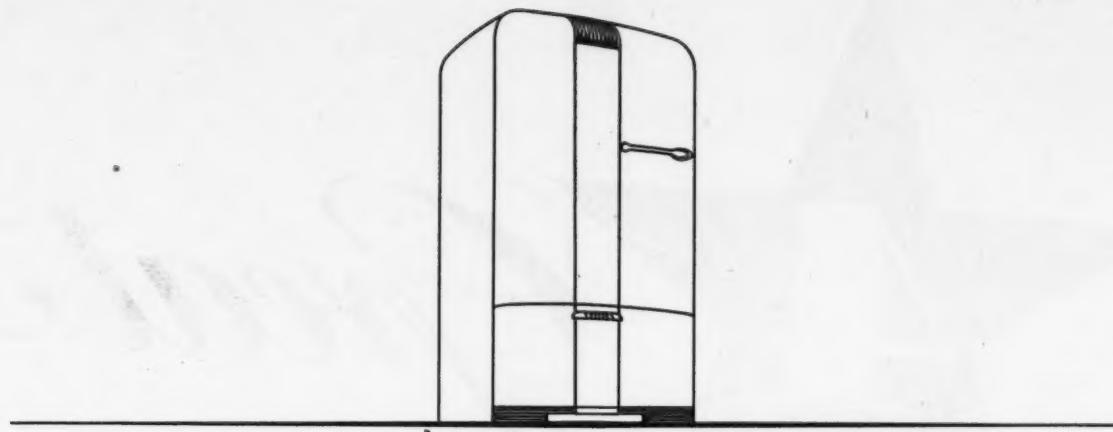
**DID YOU KNOW...**

Soft blankets of Fiberglas—blankets weighing less than one-twentieth of a pound per square foot—protect crewmen and passengers of giant commercial air transports from cold and noise, yet add little weight to the plane.

FIBERGLAS

U. S. Pat. Off.

THERMAL INSULATION



A Statement of Kelvinator's Retail-Minded Program as Selling Starts Again

With production of Kelvinator refrigerators and electric ranges increasing daily, and the familiar sound of selling soon to be heard once more in retailers' showrooms—we again make a statement of the thinking, the policies and the program that will back these new products and mark the beginning of a greater business future for retailers holding the Kelvinator franchise...the most valuable franchise in the appliance industry.

It will soon be six years since Kelvinator electrified the industry by announcing its "Retail-minded" Dealer Program...with its "selective dealer" provisions...fewer but finer models...sharply lowered prices...backed up by policies in which *retailers' interests took precedence over every other consideration*.

That program made history. It launched a sales advance which carried Kelvinator dealers to new positions of leadership. Average sales of Kelvinator retailers doubled...quadrupled...and by the end of 1941, had reached eight times the average dealer volume of 1939.

The same kind of retail-minded thinking which shaped Kelvinator's pre-war program is the sound basis of dynamic future plans.

Here are the policies that Kelvinator retailers can count on—policies conceived with their interests as retailers in mind—developed specifically to help them build a sounder business future.

RETAIL-MINDED DISTRIBUTION — A selective dealer organization of not the most but of the *finest* retailers...with an adequate market for every dealer, making possible *more sales per dealer*.

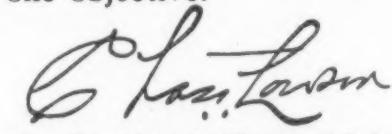
COMPETITIVE PRICES — Kelvinator's aim will always be to maintain a price policy that is vigorously competitive, prices that will mean *more sales per dealer*.

PRODUCT LEADERSHIP — Kelvinator will adhere to the manufacturing principle of "quality first." Add to this Kelvinator's determination to have its products contain brilliant features with strong consumer appeal and practical usefulness in the home. And the results can only mean *more sales per dealer*.

RETAIL-MINDED MERCHANDISING — Kelvinator advertising, sales promotion and sales training will always be designed with but one purpose—to move merchandise off the retailer's floor, to make *more sales per dealer*.

PRODUCT STRATEGY — Kelvinator will continue its policy of limiting the number of models to the type and size most needed and most in demand...thereby holding dealers' investments in inventories at a minimum. To give retailers more "top-of-the-line" sales, Kelvinator products will be designed to make the value of step-up features between models instantly visible to customers. Close adherence to these policies means *more profit per sale*.

These are retail-minded policies of Kelvinator. Behind them stand a group of men, both factory and field, who are *one* in the conviction that Kelvinator's success and future progress is dependent on the Kelvinator retailer's success. With all thinking and planning keyed to that conception, it is to be expected that Kelvinator will quickly sense trends affecting the retailers' interests...and that in the future, as in the past, Kelvinator will lead in products, policies and program, in which *more sales per dealer* is the one objective.


G. L. Larson
Vice President in Charge of Sales

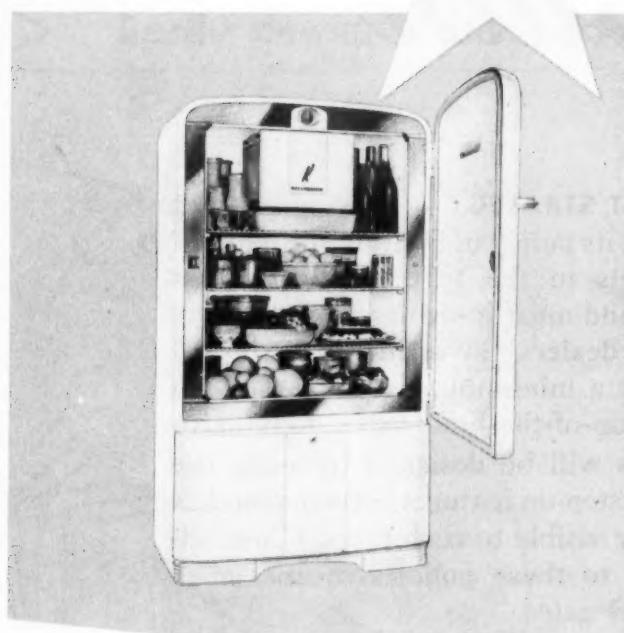
Get the Best things First Get Kelvinator



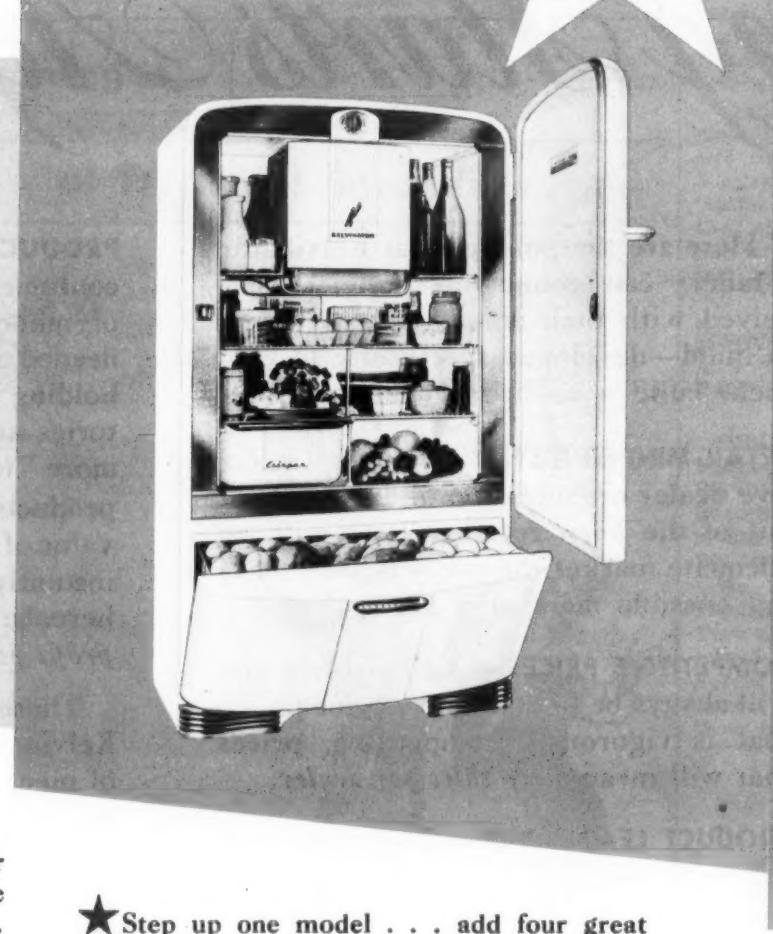
Great New

Start with

CS-7



★ New Kelvinator beauty, famous Kelvinator dependable performance and extra value, combined in a great new refrigerator that includes all of Kelvinator's basic engineering and construction features. 7 cu. ft. capacity . . . 12.2 sq. ft. of easy-to-reach shelf area . . . 9 lbs. of ice cubes.



★ Step up one model . . . add four great features the prospect can see and will want—large, sliding Kelvin Crisper . . . spacious, sliding Meat Chest . . . 1 1/4 bu. Vegetable Bin . . . 5-way magic shelf . . . plus every sales-making Kelvinator feature incorporated in the CS 7.

C-7



★ Step up one more model . . . and show your prospect five extra sales features loaded with consumer appeal . . . everything that's in the C7, plus a second large, sliding Kelvin Crisper with crystal-clear glass cover . . . 13.1 sq. ft. of shelf space . . . and 13 lbs. of ice cubes.

With these four great new Kelvinators, dealers can meet the needs of every prospect in today's great refrigerator market. In beauty . . . in consumer appeal . . . in extra value . . . these four refrigerators set new standards of leadership. Add to this Kelvinator's

dependable Polarsphere sealed power unit, with its unmatched record of trouble-free performance, and long-range customer satisfaction is assured. This, in turn, assures the Kelvinator dealer's future in the appliance business. And that's why we say—

Get the Best things First

Kelvinators

GREATER in Beauty!

GREATER in Consumer Appeal!

GREATER in Dependable Performance!

GREATER in Extra Value!

.then Step up to the Kelvinator

MM-9



IT'S A FROZEN FOOD CHEST!

IT'S THE MOIST-MASTER REFRIGERATOR!

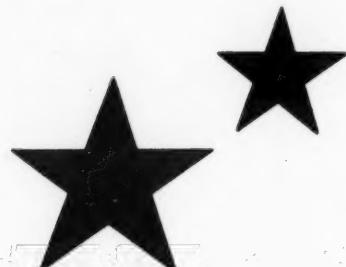
IT'S BOTH COMBINED IN ONE!



It's a Frozen Food Chest . . . it's a Moist-Master refrigerator . . . it's both combined in one beautiful cabinet. Total capacity 9 cu. ft. . . . with the zones of cold ideal for every kind of food—freezing cold . . . dry cold . . . moderately-moist cold . . . super-moist cold. Room for 36 twelve ounce packages of frozen food plus 13 lbs. of ice cubes.

Get Kelvinator

Plus 3 Great Electric Ranges



The Kelvinator "Automatic Cook"

... the top model of the Kelvinator electric range line. It features . . . the Kelvinator "Automatic Cook" control, the "brains" of the range that starts, times and stops all cooking operations . . . the Scotch Kettle that will cook a whole meal for less than 2¢ . . . multiple speed switches . . . 2-unit broiler oven . . . warming oven . . . and two utility drawers. This sensational leader, plus the two other great Kelvinator electric ranges, give the Kelvinator retailer a complete line to meet every prospect's needs.

and a powerful merchandising program to build the Kelvinator Retailer into a dominant position in the electric range business



RADIO

A new time, 10:30 P. M. Wednesdays . . . on one of the great national networks, the Columbia Broadcasting System . . . increases the effectiveness of Kelvinator's high-rating radio program. For some months now, hard-hitting radio commercials have featured the Kelvinator electric ranges and refrigerators on every program. They will continue to build public acceptance for Kelvinator electric ranges and help make the Kelvinator retailer a dominant factor in the electric range business.



LOCAL PROMOTION

Radio spot announcements, newspaper advertising, and a continuous flow of promotional material will be made available, from which specific campaigns can be tailor-made to fit the Kelvinator retailer's local market.



NATIONAL MAGAZINE ADVERTISING

The October 8th issue of Life Magazine carries this four-color, full-page advertisement announcing the new line of Kelvinator electric ranges to its millions of readers. This is the first of a series that will dramatically sell the superior features of Kelvinator electric ranges to Kelvinator retailers' prospects throughout America.



Get the Best things First Get Kelvinator

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Detroit Contractors Name New Officers, Detroit Code & Credit Restrictions Reviewed

DETROIT—The city's new refrigeration code, the government's Regulation W, and what these two documents mean to the refrigeration contractor were two chief topics discussed before the members and guests of Detroit's Refrigeration Contractors Association at their annual dinner meeting held at the Statler Sept. 19.

Twelve directors were elected for the coming year, and the board soon after chose a new president and vice president: William G. Euth, of Euth-Lambrecht Co.; and Benjamin G. Hyatt, of Copeland Authorized Refrigeration Service. Raymond M. Shock remains as executive secretary and treasurer.

The new board of directors includes, together with the president and vice president, the following men: John Duncan, of Duncan & MacNicol; A. C. Ellerbusch, Refrigeration Service, Inc.; Theodore Hutterman, Detroit Ice Machine Co.; G. L. Johnston, Johnston Refrigeration Construction Co.; J. P. Lindsay, Ace Refrigeration Service; W. F. Mercier, Mercier & Spaulding, Inc.; Chris Milazzo, Automatic Refrigeration Service; G. C. Murphree, Refrigeration Maintenance Corp.; J. E. Perry, James Perry Refrigeration; C. D. Young, Day Refrigeration Service.

Detroit's new code governing refrigeration and air conditioning practice, which became effective Sept. 27, was discussed briefly by H. H. Mills, of the city's Department of Building & Safety Engineering.

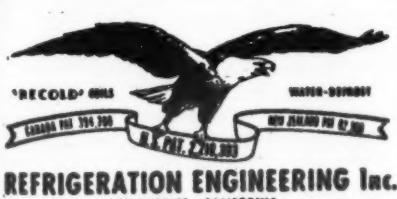
LICENSE ONLY EXPERIENCED CONTRACTING FIRMS

The new ordinance represents six years of preparation and discussion by city officials and representatives of manufacturers, contractors, and users, he pointed out. Its terms will be printed soon in multiform copies for everyone.

Its most important change is this: where an applicant for a contractor's license used to qualify merely by passing a written and oral examination, Mr. Mills said, he must now show three years' actual experience in the field.

The new code thus will work toward refrigeration maintenance by more highly skilled men, toward a

"RECOLD" WATER DEFROST



REFRIGERATION ENGINEERING Inc.
LOS ANGELES - CALIFORNIA

VISOLEAK

Detects leaks in refrigeration equipment before they cause damage to expensive installations and loss of costly products.

Years of use have proven VISOLEAK to be dependable, economical, safe and easy to use. See your refrigeration supply jobber or write for complete information.



WESTERN THERMAL EQUIPMENT CO.
5141 Angeles Vista Los Angeles 43 Calif.

greater degree of public safety, and toward greater consumer confidence in the industry.

The important points of Regulation W as it affects the refrigeration dealer and service man were outlined by R. H. Potter, assistant editor of the NEWS. He listed these points:

HOW CREDIT RULES ARE APPLIED

1. First, and most important: Any one who sells durable goods on credit must be registered with the Federal Reserve System. There is no cost involved, no red tape—the Association or any Federal Reserve bank has the blanks needed. But if there's any chance of your selling appliances, he advised, play it safe and register.

2. The regulation specifically covers air conditioning room units or home systems, all major household appli-

ances, and any mechanical refrigerators with rated capacities of less than 12 cu. ft.

3. It limits instalment terms on these items to a minimum of one third down and 12 months to pay.

4. It applies to any listed article costing \$15 or more; it does not apply to any item where the instalments will cover more than \$1,500.

Regulation W was issued in August, 1941, as an instrument limiting all types of consumer credit used for buying almost all durable and semi-durable goods. The purpose of the regulation, then and now, Mr. Potter said, is to keep the cost of living down.

None of the amendments to the regulation passed since then have relaxed its terms as far as the refrigeration industry is concerned.

A 16 point program for the Association was presented by Mr. Shock and approved for adoption by the members present. Its main provisions cover active cooperation with other groups working with or within the industry, better business ethics, and an increased scope of Association activity.

Bandoli-McIntyre New California Distributor

LOS ANGELES—Headed by former Kelvinator executives, the Bandoli-McIntyre Co. has been organized here to distribute appliances and commercial and industrial equipment throughout southern California.

Vincent J. McIntyre, active head of the new firm, holds a partnership with Marvin S. Bandoli, while James A. Bertha and Arnt Olson are limited partners.

Until recently vice president in charge of sales for Dictograph Products, Inc., Mr. McIntyre was at one time general sales manager of refrigeration for Kelvinator. In 1939 he joined Montgomery Ward & Co. taking charge of refrigeration. He went to Dictograph in 1941.

Mr. Bandoli likewise was active in refrigeration sales with Kelvinator, resigning as that company's national sales manager for refrigeration in 1939 to become vice president in charge of distribution for Victor Adding Machine Co.

Fruit 'Waste' Turned Into Frozen Dessert

ALBANY, Calif.—New frozen dessert, named "velva fruit" by its scientist-inventors, is forecast as a commercially profitable outlet for the tons of fresh fruit that go to waste each year.

Made with fresh fruit puree, a little gelatin, and some sugar, the dessert is then frozen in a regulation ice cream freezer. Peach, raspberry, strawberry, plum, and cantaloupe "velva fruit" can be made.

Sugar shortages have delayed the debut of the new dessert, although it is now being test-marketed by a big southeastern dairy products firm.

On the west coast, when sugar supplies increase, this product is expected to absorb large tonnages of too-ripe cantaloupes, plums, and other highly perishable fruits which can not stand the long trip east or be marketed because of visual defects.

New quick-frozen jams and jellies also are being made from "cull" fruit.

Still Another "FREON" Campaign Helps Sell the Locker Plant Market

Here are two "case histories" that tell how modern locker plants are using "Freon" safe refrigerants.

Selling messages such as these appear regularly in *Quick Frozen Foods*, a leading publication of the locker plant industry.

This is still another of several forceful "Freon" advertising campaigns designed to help you sell more equipment. These ads explain the advantages of "Freon" refrigerants and tell why locker plant owners are using these safe refrigerants.

Now that "Freon" refrigerants are available in any quantity, operators and designers of air conditioning and refrigerating systems are again specifying safe "Freon" refrigerants. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

"FREON" equipped locker plant ... a model of advanced design



"Freon" refrigerants are used exclusively because, states Clinton G. Bush, owner of the enterprise, "they are dependable, odorless and safe." Chill, aging and locker rooms are held at temperatures ranging from zero to 32° F. Two 5 h.p. and two 2 h.p. Carrier Self-contained "Freon-12" Condensing Units serve these departments. Two additional 5 h.p. Carrier Units using "Freon-22" maintain a -30° F. temperature in the bulk storage department leased to a frozen foods distributor is controlled with a 2 h.p. Brunner and a similar Copeland unit. One Carrier Evaporative Condenser completes the compact installation. Duct work throughout eliminates sloppy defrosting.

Whether your current or postwar plans embrace the construction of a

Another Modern, Small Community Locker Plant Uses "Freon" Refrigerants



PLANS for the Hartville Locker Service plant called for more than 1000 lockers. The plant opened for business when half that number had been installed. Within five months Dennis Steffy—owner of the plant—found it necessary to rush installation of the remainder of the lockers, and of these, 80 per cent were rented within a week.

The Hartville plant, south of Akron, Ohio, is typical of hundreds now serving residential communities throughout the country. Designed and built by the Canton Hardware Co., nearby contractors, it is well planned, complete, and modern in every respect.

A processing department and quick-freeze room are on the first floor. Another quick-freeze room is in the basement. An ingenious dumb-waiter arrangement connects the two floors . . . permitting quick handling of processed foods. A special room is designed a lard rendering kettle and a frozen custard machine . . . very popular with children.

"Freon" safe refrigerants are used exclusively. They are non-toxic and non-flammable . . . ideal for installations of this kind. Three York Condensing Units of 1 1/2, 5 and 7 1/2 h.p. provide refrigeration for the plant. Temperatures maintained range from plus 2°F. to minus 30°F.

Owners of large and small locker plants in all localities agree that "Freon" refrigerants meet their needs perfectly. "Freon-22," for example, delivers dependable, low-temperature refrigeration. If you are planning a new locker plant or are modernizing an old one . . . ask your architect, engineer, or contractor about refrigerating equipment built to give you the advantages of "Freon-22." Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

FREON safe refrigerants

How we profit by using "FREON" refrigerants is the keynote of these well-read advertisements.

KINETIC
FREON
REG. U. S. PAT. OFF.
safe refrigerants

"FREON" IS KINETIC'S REGISTERED TRADE MARK FOR ITS FLUORINE REFRIGERANTS AND PROPELLENTS

See Comfort Cooling at \$1.27 Per Month Per Room Possible With Central System Serving Large Housing Development

Proposal Includes Plan For Refrigerated Locker Plant With Processing Facilities

CLEVELAND—At an estimated cost of \$1.27 per room per month comfort cooling could be supplied from a central heating and cooling plant in proposed suburban apartment housing development which would also include a central locker plant, believes the Ric-wiL Co., manufacturer of insulated pipe conduit systems.

Described in a booklet recently published, the cost figures were estimated for a housing development drawn up by Leonard Schultze & Associates, which appeared in an issue of *Architectural Forum*. Engineering details were worked out by the office of Clyde R. Place, consulting engineer.

The proposed project consists of 36 "bar" shaped and 23 "U" shaped apartment buildings which are supplied with heating and cooling from a central mechanical plant. The bar shaped buildings are two stories high with full basement and each contains four apartments. The "U" shaped buildings are three stories high without basement but with 12 built-in garages. The project has a total of

59 resident buildings, comprising 328 apartments and 1,479 rooms.

The central mechanical plant would supply 600 boiler horsepower for heating and 400 tons of refrigeration for cooling the apartments. Powering the locker plant would be a separate refrigeration machine.

"Since a combination of heating and cooling is to be considered, the use of water as a conveying medium is ideal," declares the Ric-wiL booklet. "Underground piping can be used to circulate chilled water to the buildings from a central plant for cooling in the summer, and hot water for heating in the winter. The use of a central plant for heating and cooling relieves the tenant of any worry about fuel, reduces the fire risk, and makes for cleaner buildings."

Each apartment would have an automatically controlled, forced air circulating system for both heating and cooling. . . .

Careful consideration of the design of such a plant indicates that the cost of water distributing piping will be slightly higher than the cost of high pressure steam distributing

piping. This is due to the increased size of piping only, as the excavation and labor costs will not materially change.

"However, this increase in cost will be offset by the elimination of pressure reducing valve stations, condensate or vacuum pumps, and a correspondingly simpler boiler plant design with the elimination of complicated boiler room piping, feed water heater, feed pumps, suction tanks, and the like. The omission of condensate pumps, vacuum pumps, and pressure reducing valve stations means less maintenance throughout the project."

How Costs Are Estimated

Cost of installing the cooling plant would total approximately \$80,000 with a yearly operating cost of \$22,600, it is estimated.

Additional space in the boiler plant for refrigeration equipment would cost \$10,000, and the refrigeration equipment itself, including compressors, coolers, pumps, motors, controls, cooling towers, etc., would require \$60,000. The 328 apartments could be furnished with equipment to operate off the cold water lines at a cost of \$30 each for a total expenditure of \$10,000.

Over and above the cost of heat-

Yearly Operating Cost of Central Plant Cooling System

Return of investment based on 20-year life of equipment	\$ 4,000
Average interest at 6% on unreturned investment	2,520
Taxes 2%, plus administration 4%, or 6% of \$80,000	4,800
Electrical energy (ref. plant) based on 2c/kwh.	6,000
Condenser water loss	100
Operating labor	3,600
Repairs	1,580
TOTAL	\$22,600

ing equipment each apartment would require extra coil surfaces (\$10), additional automatic control (\$10), and larger ducts (\$10), for summer cooling.

The yearly operating cost of the cooling system, which figures to \$22,600, averages \$15.30 per room for each cooling season, or \$1.27 a month for each room. Breakdown of operating cost appears in the accompanying table.

The design temperatures were taken as those for New York City and vicinity; to maintain inside conditions of 80° (dry bulb) and 50% relative humidity when the outside conditions do not exceed 95° (dry bulb) and 75° (wet bulb) in the summer, and to maintain 70° inside with an outside temperature of 0° in the winter.

In order to save on the cost of refrigeration equipment, it was assumed that the apartments having two stories would be cooled on the first story only during the day, and on the second story only at night.

"Due to the lack of accurate data on residential occupation regarding the length of time the refrigeration equipment would be required to operate, an arbitrary figure of 1,500 hours per season at 50% capacity was assumed," states the Ric-wiL booklet.

"While the actual figure may differ considerably from year to year, this is probably a good average. However, if this figure is in error by 10% to 25% either way, the difference in the overall yearly operating cost will be negligible since the total electrical energy for driving the refrigeration equipment on this basis amounts to only \$6,000 per year of \$0.34 per room per month."

A reversed return system is used for the flow of water in the two main

circuits running from the central mechanical plant to the individual apartment buildings. That is, the building in each circuit nearest the mechanical plant on the supply side of the main has the shortest supply main but the longest return main.

The return main parallels the supply main with the water flowing in the same direction in both mains, returning to the central plant from the last building for re-heating or re-cooling.

"This would result in approximately equal pressures at the take-off points to each buildings with a minimum of adjustments required to balance the water flow," states the booklet.

Apportioning' the Cooling

"However, the different distances away from the mains, and different heating and cooling loads for the two types of building would make it necessary to have some means of adjusting the amount of water flowing to each air conditioning unit.

"Therefore, it would be necessary to provide a test tee in each supply and return connection to each air conditioning unit for manometer and thermometer readings, and a plug cock in the supply pipe to regulate the amount of water flowing to each unit. . . .

"After the water flow to all of the air conditioning units has been properly adjusted, the plug cocks would be located in position and the test tees plugged. From this point on, the engineer in the mechanical plant can vary the temperature of the water delivered to the mains in accordance with the outside conditions of temperature, solar intensity, wind velocity, etc.

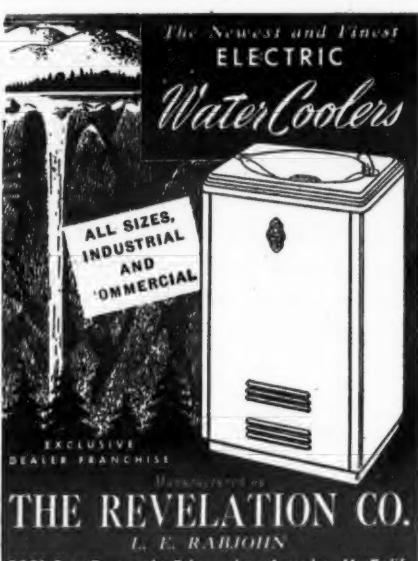
"This would prevent any tenant from obtaining more than his allotted share of heating or cooling by setting his thermostat at an extreme temperature.

"The water quantity to be circulated was determined by the maximum summer heat load using an 8° rise in temperature between the water entering and leaving the different air conditioning unit coils.

"The same quantity of water would be used in winter, using the same pumps, but due to the greater number of heat units to be added to the air per volume of water, the drop in water temperature in the coils would amount to about 29°."

The basic heating equipment for each apartment consists of a conventional type forced hot air heating unit, having a heating coil motor-driven fan, filters, cases, and thermostatic control with a system of supply and return ducts for circulating and re-circulating the air between the unit and the rooms.

(Concluded on next page)



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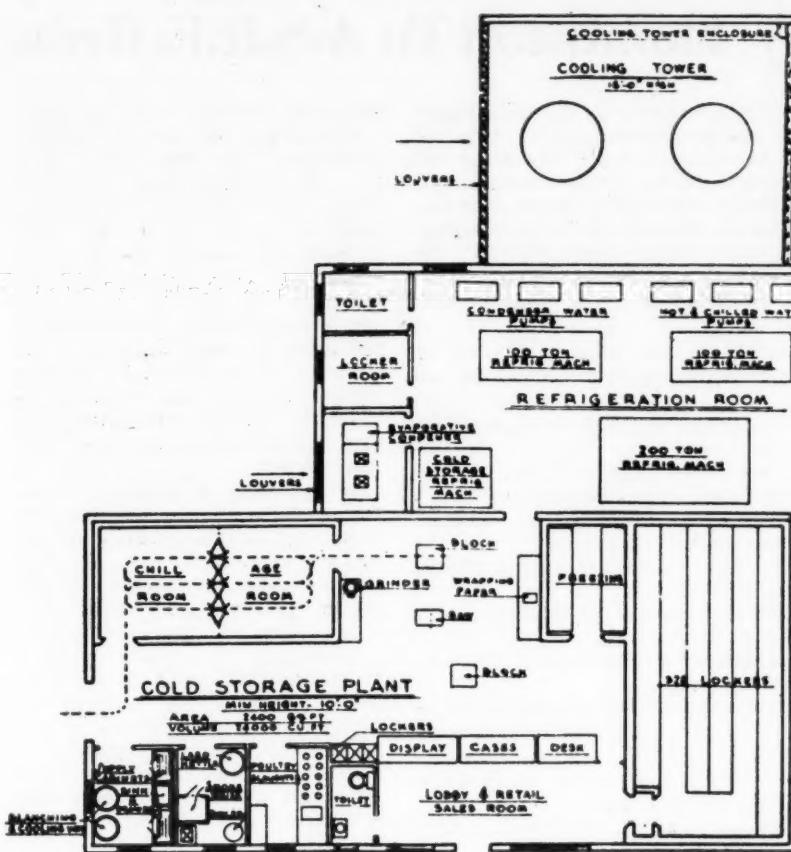
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Layout For Housing Development Cooling System



Design For Apartment Housing Group Takes Certain New Features

(Concluded from preceding page)

"The additional equipment necessary to make it function as a cooling system consists of extra rows in the coil, a small addition to the thermostatic control system, and an increase in the sizes of the distributing ducts. The latter is necessary because normally a larger amount of air is required in the summer than in the winter.

"It should be noted that the apartments occupying two floors have their supply ducts provided with dampers, so that in the summer the lower floor may be cooled by day and the upper floor by night, thus effecting a saving in refrigeration over that required to cool both floors simultaneously.

Air Distribution Setup

"The 'bar' shaped buildings have the air conditioning units in the basement. The 'U' shaped buildings have the units for six of the apartments in the storage spaces adjacent to the garages on the first floor, and the units for the two third-floor apartments are located at the head of the public halls on the third floor level. Duct runs have been kept as short and straight as possible consistent with obtaining satisfactory operation.

"Before having actual figures to work on, it was planned to provide an outside air connection for 100% fan capacity so that the tenants can take advantage of any cool outside air during the nights to save refrigeration," declared the Ric-wiL booklet.

"If this connection were inadvertently left open during the winter, the coil could freeze. Since the savings in refrigeration resulting from such an arrangement would be relatively minor, it would not seem advisable to assume such a risk. Therefore, the connection for fresh air to the unit was omitted, relying entirely upon leakage from the outside through windows and doors.

"Accepted standards for fresh air per person vary from the old figure of 30 cu. ft. per minute to the war time minimum of 5 cu. ft. per minute. Leakage through windows on an average hot summer day would probably approximate the lower of these figures. If desired, a window could be opened part way to increase the amount.

Plan for Control Methods

"The room thermostat is arranged to give the tenant three positions of control: Summer, Winter, and Off. When turned to Summer, the thermostat starts the fan when the room temperature rises above its setting, thus causing cool air to be circulated to the apartment.

"When turned to Winter, the ther-

mostat starts the fan when the room temperature falls below its setting, thus causing warm air to be circulated to the various rooms. In actual practice it might work out satisfactorily to leave the thermostats set at about 72° both summer and winter, just shifting the Summer-Winter control once each season.

"The actual over-all control would be done by the plant engineer by varying the water temperatures as mentioned before. During the intermediate seasons, or times when the apartments would be comfortable without either heating or cooling, the tenant could open his windows and turn his control to Off. This would effect a saving in electric power consumption by rendering the air conditioning fan inoperative."

Recommend Several Machines

In the central heating and refrigeration plant would be located refrigeration equipment capable of producing 400 tons calculated as necessary for the housing development. In the interest of economical operation, the refrigeration capacity is divided into two 100-ton compressors and one 200-ton compressor, with condenser water and circulating pumps to correspond.

This gives the operating engineer a choice of 25%, 50%, 75%, or 100% cooling capacity to take care of load fluctuations.

One cooling tower is provided having two fans which would give 50% and 100% capacity operation. The saving in providing four points of operation would not warrant the purchase of the additional equipment involved, believes the Ric-wiL company.

To provide for winter heating two 300-hp. steel boilers are needed, fired by burners using heavy fuel oil with oil storage tanks adjacent to the plant. This arrangement would give a capacity of 50% by the operation of only one boiler at a time, and this could be further reduced to take care of lighter loads by decreasing the amount of fuel consumed by the burner.

"Another feature which could be added and which we have included in the mechanical plant, is a cold storage and locker plant," states the company. "Even taken alone, plants of this character return good profits on a small investment, but considered in conjunction with a boiler and refrigerating plant where experienced engineers are on hand at all times, such a plant should prove an exceptionally attractive additional investment."

As designed for the project, the locker plant has a capacity of 328 lockers, and is equipped with chill and age rooms, freezer, and the usual complete processing equipment. Refrigeration would be provided by a condensing unit independent of the three heavy-duty machines supplying the air conditioning system.

"One of the decisions to be made in contemplating a community with central heating and cooling plant is the method of charging for these services," the company states in the booklet. "The usual procedure is to include winter heating in the price

of the rent, but the addition of summer cooling introduces another problem.

"Before any figures were available to be used as a basis, consideration was given to the idea of making summer cooling available to the tenant on an optional arrangement. By installing a meter on the chilled water line to the apartment cooling unit, the amount of cooling used dur-

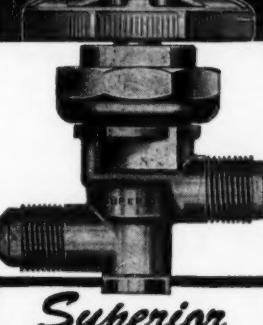
ing a given period could be determined and charged to the tenant.

"Since the refrigerating equipment and plant would have to be of sufficient size to accommodate all the apartments, and the fixed charges would be the same regardless of the number of tenants using cooling, the cost of the cooling per room would constantly vary, depending on the number of apartments cooled and the

amount of cooling used by each individual.

"The practical solution would be to add the cost of summer cooling to the rent. Each tenant can control the amount of cooling he desires up to the maximum allocated to his apartment. This maximum is fixed by a locked valve in the chilled water line. This arrangement eliminates a considerable amount of expense."

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FIGURE 1—Shows wrenches properly applied to main body and auxiliary body for breaking the joint; the first step in disassembling the valve.

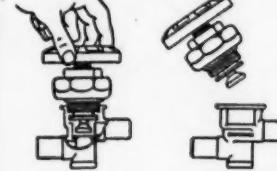
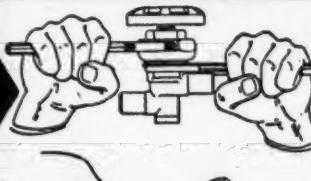


FIGURE 2—Observe here the entire internal assembly being removed by hand.

FIGURE 3—The entire internal assembly has been removed from the main body.

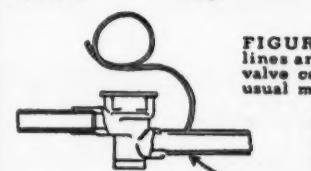


FIGURE 4—The main body, devoid of all internal parts, is now ready for cleaning and fluxing of the sweat tube connections preparatory to soldering.



FIGURE 5—Refrigerant lines are soldered to the valve connections in the usual manner. Danger of distorting internal parts is eliminated because all these parts have been removed.

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DEALER AGREEMENT

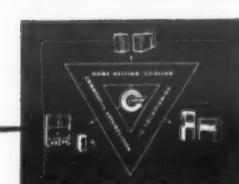


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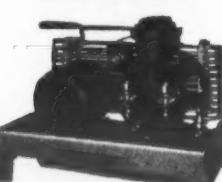
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AR-468

Probable Uses of 'F-22' Outlined By Thompson To A.S.R.E. Group

WASHINGTON, D. C.—The many and varied applications of "Freon-22" refrigerant were discussed at the first meeting of the season in the Baltimore-Washington Section of the American Society of Refrigerating Engineers, held here recently, by R. J. Thompson, chief engineer, Kinetic Chemicals Co., Wilmington, Del.

Mr. Thompson listed a number of specific applications of "Freon-22" as follows:

Calibration of temperature measuring devices.

Accelerated aging of steel for the production of precision tools.

Cooling and storage of aluminum rivets, spars, and sheets.

Cooling of metal bushings or shafts for shrink fit.

Solution cooling for the quenching of high speed steel.

Reduction of temperature of very volatile liquids.

Hardening of pitch to make it brittle and easily removable from lenses.

Processing and testing of chemicals and pharmaceuticals.

Testing of airplane engines, instruments, radio and radar equipment, calibration measuring devices.

Cooling of lubricants in high speed machining operations.

Cooling of brine circulated to welding tips.

Low temperatures for the production and storage of penicillin and blood serum, blood for plasma and blood plasma.

Low temperature chambers designed to duplicate stratospheric conditions for testing instruments, flying clothes, personnel, and equipment.

USES IN PEACETIME

He said that "Freon-22" will be used in many present and postwar installations where more efficient operation is desired in providing the necessary lower temperatures for locker plants, quicker freezing of food stuffs, greater volume of product handled by the quick freezing units, home or farm freezers, cold storage and ice-making plants, as well as countless other low temperature applications.

The necessity of exploring the proper design of equipment for the efficient use of the refrigerant medium was emphasized by Mr. Thompson, who pointed out that research in this direction has been considerably restricted by military secrecy surrounding many installations.

He said that refrigerating engineers have realized during the last few years that the way to build a refrigerating system is, first, to choose a refrigerant of the desired properties to accomplish a purpose, and, then to design the various pieces of equipment around the refrigerant.

FORECASTS DESIGN CHANGES

"Freon-22," a member of the large family of fluorine compounds used as refrigerants, has been in practical use since 1936, asserted the speaker, but was never intended to replace "Freon-12" for the higher range of evaporator temperatures. It is true, said he, that yesterday, perhaps some of the "Freon-22" machinery was just a modification of "Freon-12" design, but tomorrow it will be designed especially for this refrigerant.

Many in the industry have imagined that it might prove expedient to convert existing systems to "Freon-22" inasmuch as "Freon-12" had not been readily available, but at no time did the manufacturer state or imply that the lower temperature refrigerant could be used in equipment operating at the higher temperatures, or that a simple sub-

stitution could be made, he declared.

Discussing the quick freezing of foodstuffs, Mr. Thompson pointed out that the data thus far published indicate that the lower temperatures (-20° F. to -50° F. versus -10° F.) give better results in most cases because of the smaller crystals of water in the cell structure. Those few products such as tomatoes, egg yolks, and crisp vegetables which seem to be benefitted by the higher temperatures in the freezing operations, do not lend themselves well to any freezing operations and may be disregarded.

Irrespective of quality, continued the speaker, a certain quantity of food must be frozen in a given period of time and the only way to shorten the time and increase the volume of frozen produce per cubic foot of space is to use lower temperatures.

Therefore, he recommends that those planning quick freezing equipment ignore the differences of opinion as to the necessity of low temperatures in the operation and rivet their attention on the fact that time and economy of space may be effected. Quality, though paramount, is of secondary importance in the consideration of economical apparatus design.

HEARS VETERANS' REPRESENTATIVE

"Re-employment Problems of the Returning War Veterans" was the subject of an instructive talk by Omar B. Ketchum, National Legislative Representative of Veterans Wars.

Mr. Ketchum, avoiding the easy condemnation of labor, capital, and current legislation, simply challenged the practicability of current legislation and the wall of protection built up during the war years by labor unions.

The speaker viewed harmful current legislation, calling for a bureaucratic cure-all before jobs are actually lost, as not compatible with the government demand for a return to "free enterprise."

Furthermore, he said, the veteran, percentagewise, was no more demanding of special privilege than he was before entering the service, and in light of this fact, the veteran simply wished obstacles to re-employment to be removed. In effect, the veteran desired only to trade his qualifications to produce normal, reasonable, and useful work.

To this end, Mr. Ketchum proposed the use of hard-headed business sense in the (1) gradual redistribution of population, (2) labor's recognition of war service seniority rights of all qualified returning service men, thus affecting a penetration of labor's wall of protection built up during the war, and (3) the elimination of bureaucratic Government jobs with attending political favoritism.

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Minneapolis-Honeywell Co. Reveals Production Progress & Product Plans

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. expects to be back in its regular production at a rate better than that of prewar years within a short time, company officials have announced.

By the end of October, the company's production will be 30% greater than its best prewar year providing essential raw materials are available in the necessary quantities, it was said.

On V-J Day the company received telegrams from the armed services in effect terminating all of Honeywell's remaining war contracts. There are a few developmental contracts still in force, but all production contracts have ended and war production brought to a halt, Harold W. Sweatt, company president stated.

During the war years, company engineers developed a number of new control systems that will soon be on the market, said Mr. Sweatt.

Among the new M-H products expected to be in demand is a new automatic control system called "Moduflow," Mr. Sweatt said. This new system, he added, eliminates drafts and cold floors, can be applied to every type of heating system and can be installed in most existing as well as new homes. The company also plans to market a system of personalized apartment heating controls which gives every apartment dweller control over the amount of heat delivered to his own apartment, thus freeing him from dependence upon the janitor.

Minneapolis-Honeywell's Aeronautical division, which was started shortly before the war, also has ready a number of controls for the postwar aircraft market. Among these are a new electronic automatic pilot, a new cabin temperature control system, and some new engine controls which greatly simplify the problem of controlling power output on multi-engined airplanes, he said. A number of railroad controls have also been developed and have already attracted considerable interest in the railroad industry.

Although restricted production of the company's regular products was continued during the war, almost the

entire output of these devices went to high priority users such as war plants, Mr. Sweatt added. As a result very few thermostats, air conditioning and ventilating controls found their way into the civilian market since Pearl Harbor and today the backlog for these "regular" controls is the greatest in the company's history.

The company believes that shipment of these items for ordinary civilian use will begin in substantial quantity during the fourth quarter of the year, and will continue at a high rate for some time thereafter because of the anticipated nationwide housing boom. Production of new homes, many of which will use Honeywell products, has been estimated at between 680,000 to over 1,000,000 units a year for at least 10 years, the company official said.

Commercial Dealers In Charleston Organize

CHARLESTON, W. Va.—At a meeting here last month, the leading commercial dealers in this area voted to organize the Commercial Refrigeration Dealers' Association of Charleston as the initial step in a long-range program of mutual cooperation.

Members of the Board of Directors elected at the meeting are: J. F. Watson, McCray Refrigerator Co., chosen to serve as president of the group for 1945-46; Harry G. Frame, Frame Refrigeration Service, Inc., who will serve as secretary-treasurer; F. M. Lewis, Anchor Fixture Co.; D. R. Johnson, West Virginia Distributing Co.; and Charles R. Hooten, National Equipment Co.

Other charter members of the new association whose representatives participated in the meeting and subscribed to the plan were Amick Refrigeration Service, National Scale & Fixture Co., Conditioned Air, Inc., Thrush Refrigeration Co., all of Charleston, and J. B. Huddle, Beckley, West Va. It was voted to hold meetings regularly hereafter on the second Friday of each month.

Dehydrated Foods 'Gone With the War' as Plants Make Plans For Quick-Freezing

SAN FRANCISCO — While it boomed tremendously during wartime, the dehydrated vegetable market has already shriveled to ant-hill size since V-J Day, according to a Department of Agriculture survey that is confirmed by leading California dehydrators.

Postwar civilian demand is estimated at 25 million pounds of dried vegetables, compared with the production of 190 million pounds last year, most of which went for the military and lend-lease, the survey showed.

The above estimated civilian demand is bigger than the prewar one, and all indications are that some people in the industry are trying hard to salvage even more of it.

Some dehydrating firms are planning immediately to switch their efforts to canning or freezing of foods.

"We wouldn't stick in this business for anything," says the manager of one firm that dehydrated 5.5 million pounds of carrots and potatoes during the war. "Have you ever tasted a dehydrated carrot? You don't know if you are eating a vegetable or just a stick of wood!"

Conversion to vegetable canning as soon as tin and sugar supplies permit is the course of action planned by this firm.

"We're going to switch over to quick-freezing vegetables," says the owner of one of the largest dehydrating plants in the country. His plant has been drying 14 million pounds

of cabbages, carrots, and potatoes during each war year, but realizes the demand is too small in peacetime.

Not all of the 141 dehydrating plants are going to give up without a struggle. Department of Agriculture surveys indicate that there will undoubtedly be too many firms in the fight for the dwindling market.

Automatic Sales Co. of Houston In Larger Quarters

HOUSTON, Tex.—Automatic Sales Co., wholesale distributor for Norge products, Zenith radios, Quick Meal oil ranges, and Proctor appliances, have enlarged their offices by 2,500 square feet, Willard M. Wood, owner, has reported.

The additional space will provide for modern show room facilities, he said.

Porter Vice President Of F. B. Connelly Co.

SEATTLE—Frank C. Porter has been elected vice president of the F. B. Connelly Co., home appliance distributor here.

Since his coming to the Connelly organization in 1935, Mr. Porter has held such positions as office manager, credit manager, and sales manager. Prior to 1935, he was zone office manager for General Motors Corp. here.

Maker of Thor Washer To Build Coast Plant

LOS ANGELES—Electric Household Utilities Corp. disclosed that the company will build a \$250,000 plant here to manufacture Thor washing machines, ironers, and dishwashers.

Although the site is not yet selected, the production is planned by the beginning of the year with 400 to 500 employees. It will be the first plant to make washing machines here, said E. N. Hurley, board chairman of the company.

The pent-up demand throughout the nation for 7,000,000 clothes washers is the incentive that started the company on its venture, he added.

Bergman Norge Co. Takes New Quarters

BUFFALO—Announcement has been made of a new location for the showrooms, offices, and parts department of the Bergman Norge Co. here.

The company, distributor for Norge appliances in the western New York and northern Pennsylvania area, expects to occupy its new building at 94 Elm St., at Eagle, Buffalo, by Oct. 5.

New Los Angeles Dealer

LOS ANGELES—Coast Radio Electrical Co. is the firm name under which William A. Sobelman has published a certificate that he is conducting a radio and electrical appliance business at 2715 W. Sixth St. here.

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1. THE EXCHANGE PLAN

Covers the most commonly used types of G-E fractional-horsepower motors. Makes possible immediate replacement, from G-E field stocks or from your own buffer stock. Replacement motors carry the G-E new-motor warranty, except for finish.

2. SPECIAL REPAIR SERVICE PLAN

Provides for factory repair of semi-standard G-E fractional-hp motors not covered by the EXCHANGE PLAN, at established prices. Enables you to make quick, accurate, on-the-spot estimates. Repaired motors carry the G-E new-motor warranty, except for finish.

3. REGULAR REPAIR PLAN

Covers fractional-hp motors not included in either of the other two plans, except extremely old or obsolete models. Inspection is made at the factory, and a cost estimate is submitted before work is started. These motors also carry the G-E new-motor warranty, except for finish. This plan rounds out this G-E service and enables you to handle repairs on practically any G-E fractional-horsepower motor.

Our Factory Service Plans open the way to future appliance sales

In these days when new appliances are scarce or unobtainable, it's a big job for dealers to promptly service appliance motors. You can take care of this job if you're prepared to repair or replace inoperative motors quickly, economically, and expertly. And the good service that you render today will bring you customers for appliances when new appliances are again available.

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Market Analysts Review Sales and Profits Figures of a Leader in the Air Conditioning And Refrigeration Industry-York Corporation

Type of Products Made, Probable Market, and Distribution Methods Are Covered In Analysis

Editor's Note: This is the second part of a survey of the air conditioning and refrigeration industry recently completed by S. M. Ahmed, economist, for Hirsch & Co., of the New York Stock Exchange.

The first part of Mr. Ahmed's report, reproduced in the Sept. 10 issue of the News, reviewed the growth of the industry since 1932, the scope of its participation in World War II, and the pattern it seems ready to follow during the next five years.

Presented in this section is a condensation of Mr. Ahmed's research study of a giant in the commercial and industrial field—York Corp.

A pioneer in the field, York has specialized in commercial and industrial applications. The company enjoys an enviable reputation in the industry, and maintains high manufacturing standards.

Engaged exclusively in the manufacture of air conditioning and refrigeration machinery and equipment, it has also pioneered in scientific improvements.

Lastly, it is among the few impor-

tant companies that receive the greatest part of their revenues from the air conditioning and refrigeration business, and that are publicly owned, with capital shares listed on the New York Stock Exchange.

York Corp. in 1945 completed its sixtieth year in the field of mechanical refrigeration. Like the corporate evolution of other industrial companies, York went through a series of consolidations. It started in 1885 as

a partnership under the name of York Mfg. Co., becoming a corporation in 1895.

The company effected a series of mergers in 1927, when York Ice Machinery Corp. was incorporated under the laws of the State of Delaware, and revised its capital structure and assumed the present title, York Corp., in 1942.

Business Activities

York's long years of experience in the refrigeration and ice machinery field are reflected in the leading position it holds. It has achieved a worldwide reputation, and is popularly advertised as "Headquarters for mechanical cooling since 1885."

In the past, York accounted for a substantial part of the total industrial refrigeration business. In the marine refrigeration field, York, as the foremost manufacturer to develop this line, did more business than any other company.

A pioneer in the refrigeration field, with the coming of air conditioning, it was logical for York to enter this line. The company began manufacturing air conditioning equipment about 1928, and since 1932, has been intensifying its efforts. Now it has also become one of the two most

important factors in air conditioning. York obtains most of that business from industrial and commercial users.

York's refrigeration activities cover virtually all phases of the industry except household refrigerators. Its air conditioning activities similarly span the entire field from large, highly specialized application to the small, self-contained room cooling unit, marketed under the name of "Philco-York."

The company has developed cooling units, for installation in offices, restaurants, and residences. To cover the food freezing market, the company has developed a "Fast Freezer" compact unit in two sizes of 3,500 lbs. and 6,000 lbs. per hour capacity. In this unit, fruits, vegetables, sea food, meat, and poultry are frozen.

Dry blast systems, now used to increase efficiency in the steel industry, represent another outstanding York product. York builds three types of refrigeration apparatus—absorption, reciprocating, and centrifugal. Its new turbo-compressor—an important piece of equipment in all refrigerating and air conditioning installations—is built with from 50 to 300 tons capacity.

An outstanding popularity has been enjoyed by the company in the refrigerated truck and trailer line. It has equipped most of the refrigerated trucks used by the armed services, and should be in a position to capture a good portion of the civilian market. Its portable ice plants vary from one-half ton to five-ton daily capacity, and stationary plants of all sizes.

The growing inspection and service division of the company, up to 1944, had in effect 1,600 contracts for service in 250 cities throughout the country. York, as an outgrowth of the contract with Woolworth Stores, was the first manufacturer to offer inspection and maintenance service in the refrigeration and air conditioning field.

Two types of services are offered on a fee basis under contracts up to five years. One service covers (I-A-O), "inspection," "adjustment," and "oiling," and the other includes in addition replacement of parts.

While in the beginning primarily interested in maintaining in proper working order installations equipped with York machinery, the company in recent years broadened its activities to cover plants equipped with machinery of other manufacturers. The service has definite advantages to its users for it assures continuous performance, reduces breakdowns, cuts down cost of operation and maintenance, and eliminates a special maintenance engineer for the plant.

With its countrywide branches, York has been able to maintain personnel for this work on an economical basis. The prospects of large numbers of air conditioning installations in the commercial and industrial fields offer this division possibilities of further growth which should assure a profitable business with sizeable reductions in overhead.

compressors itself. York has perfected certain improvements on the original design.

The company's friendly relationship with Allis-Chalmers is evidenced by the presence of Walter Geist, president of Allis-Chalmers, on York's Board of Directors. This has given York the additional advantage of obtaining the experienced advice of one of the leading manufacturers of machinery.

In 1940, York obtained the exclusive license to make and sell the Flakice Frosty Ribbon Machine with an important potential postwar market. The machine produces ice in the form of thin and slightly curved pieces within a few minutes after switching on the electric current.

This is particularly valuable for products where freedom from bruising and quick cooling is important. The great sales appeal for the machine lies in its savings; two to three years savings in the cost of ice bought pays for the machine itself. Sales for war purposes have been large, and a big civilian demand is predicted. The annual royalty rate is based upon a sliding scale with the rate decreasing as volume increases. Minimum royalty is \$30,000 per annum.

Sales Distribution Effect of War

Wartime limitations on the manufacture of refrigeration and air conditioning equipment to conserve essential raw materials—copper, aluminum, steel, rubber, etc.—did not adversely affect York's activities. The company was not only able to maintain its prewar level of activity, but to substantially increase its output.

This was due first to a large demand for the company's products from armed services and essential civilian supply sources; second, the company was able to utilize its facilities to manufacture war equipment unrelated to its standard line. War business required only a small percentage of productive facilities.

York's war equipment business is showing a sharp decline as most of the military needs in this industry have been met. As about 90% of uncompleted war orders are for refrigeration and air conditioning, the company is in a favorable position in case of cancellations to dispose of inventory through civilian channels.

1942 1943 1944
Sale of Refrigeration and Air Conditioning Equipment 73% 85% 84%
Sale of War Equipment 27 15 16

York's sales are characterized by their wide distribution among all classes of customers. A sizeable part of York's industrial business comes from the brewery, food, and meat packing industries. However, no single industry or commercial group occupies a preeminent place as the largest customer for York's products.

Then too, there is a trend toward a more even distribution of bookings throughout the year. These factors

	Distribution of Sales by Major Divisions		2 Years 1939-40	4 Years 1939-42	4 Years 1941-44
	1938	1939			
Refrigeration for Industrial and Commercial Purposes	38%	39%	34%	42%	52%
Air Conditioning for Production and Comfort Purposes	43	45	44	34	14
Accessory Equipment, Supplies, Maintenance Service, and Miscellaneous War Products Unrelated to Refrigeration or Air Conditioning	19	16	22	24	21
	...	...	...	...	13
	100	100	100	100	100

Manufacturing

Of special advantage to York are its manufacturing arrangements with other companies. In 1939, the company, under contract, began the manufacture of a portable cooling unit, with capacity up to $1\frac{1}{2}$ hp., to be distributed under the name of "Philco-York," which was sold exclusively to Philco Radio & Television Corp. While production of these units was discontinued under governmental war regulations, it will be shortly resumed.

There is a great deal of optimism about their postwar sales volume. In 1942, the last year in which manufacture was permitted, portable units accounted for about 5% of York's total sales. Industry estimates a need of 100,000 units in the first postwar year to satisfy the demand, or two and a half times 1941 sales. Potential sales are estimated at a half million units a year.

York's position in the large size industrial refrigeration market was broadened when it obtained exclusive sales rights to the centrifugal compressor manufactured by Allis-Chalmers Mfg. Co. At present, due to the exigencies of war work, the company is manufacturing these

largely result from a more diversified line of products which enables better planning of sales and manufacturing schedules.

Foreign sales in the prewar period averaged above 5% of the total. During the war years shipping and exchange restrictions caused them to drop sharply. In 1944, largely due to lend-lease purchases, sales rose to the prewar level. The company expects a large volume from customers in South America and the Middle East, and is planning an intensive campaign to develop those markets.

Marketing

York's products are sold through 31 district and branch offices located throughout the country, as well as by a sales agency—Westerlin & Campbell Co.—and by numerous individual dealers in the United States and foreign countries. The district and branch office organization includes, in addition to personnel devoted to sales work, an engineering, contracting, installation, accounting, and collection staff.

In recent years the company, by expanding its dealer organization, has made an increasing number of ice

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YORK CORP. Orders Booked and Gross Sales (in thousands)						
	Orders Booked	Uncompleted Orders at Year End	Total Sales	Index of York Sales 1933=100	Estimated Sales Excluding War Equip.	Index of Sales Excluding War Equip.
Nine Months Ended						
June, 1945	\$22,621	\$17,696	\$30,049			
June, 1944	30,312	28,117	24,798			
Year Ended						
Sept., 1944	41,435	27,140	34,107	460	\$28,650	385
Sept., 1943	34,463	24,684	31,394	423	24,500	330
Sept., 1942	40,071	27,750	22,541	304	20,700	279
Sept., 1941	27,465	10,283	19,817	267		
Sept., 1940	16,683	3,067	16,164	218		
Sept., 1939	15,356	2,527	15,030	203		
Sept., 1938	13,987	2,201	14,287	193		
Sept., 1937	18,715	2,657	17,516	236		
Sept., 1936	13,000	*	13,482	182		
Sept., 1935	*	*	12,699	139		
Sept., 1934	*	*	8,915	120		
Sept., 1933	*	*	7,422	100		

*Not Published

(Concluded from preceding page)
sales to dealers; these sales were formerly handled by branch offices. This development is in line with York's expansion in the field of smaller commercial size refrigeration and air conditioning equipment, as contrasted with equipment for the larger industrial users.

From a longer term point of view, there is a trend towards an increasing percentage of York's dollar sales in products manufactured in its own shops. In 1936, sales represented by material manufactured in company plants averaged 59.4% as compared with 72.3% in 1944.

Research

York's position in the industry is the result largely of its engineering skill and research rather than patent or license protection. Basic research and product development have been important in York's operation.

Some years ago, the company established a basic research department for the discovery of new methods and applications of refrigeration. Since the beginning of the war, the activities of the research staff have doubled.

Now with the war program at an end, technicians will be able to devote their full efforts to postwar study and development. Wartime experience materially furthered engineering and research skill, in many cases furnishing a splendid background for making products more serviceable and essential, and for developing new markets.

An analysis made in 1940 showed that about 80% of the underlying products forming the nucleus of sales had been developed during the preceding eight years.

There is a considerable amount of cross licensing of component parts and products among air conditioning equipment manufacturers. Auditorium Conditioning Corp. was organized by leading refrigerating and air conditioning companies to hold and acquire patents and grant licenses thereunder for their use at royalty rates. York owns a 20% interest in Auditorium.

In August, 1943, the U. S. Department of Justice brought a suit against Auditorium under the Sherman Anti-Trust Act. It is believed that Auditorium Corp. will be dissolved with a trustee to administer the patents. The results should not affect York's operation or earnings to any substantial degree.

Sales

For the fiscal year ended September, 1944, York Corp. reported total sales of \$34,106,874, the highest in the company's history. Sales have been steadily rising since 1934, except in 1938, when they were affected by curtailment of the building program and industrial activity.

The war undoubtedly provided additional stimulus to sales in the past three years. Deducting the sale of war goods, standard line sales still showed a strong upward trend. In the 10 year period (1934-1944) York sales increased 460%.

This trend is considered favorable for net profits, since wholesalers and contractors themselves operate on a smaller margin.

The long term sales record of York has shown steady growth. During the pre-depression years, sales were rising and had reached an \$18,835,000 level in 1926. After 1926, the sale of ice machinery which accounted for a large part of York's business,

chinery business considerably weakened earning power.

Promotional and research cost of the air conditioning division during the earlier years absorbed much of gross. Keener competition for the limited amount of business available was another contributing factor for successive deficits from 1931 to 1935.

Large expansion in the air conditioning field permitted York to report profits during 1936 and 1937, but in the following two years, decline in business activity resulted in losses.

Since 1941 earnings have been steadily rising. Principal sources of improvement were increased volume of sales, and stabilized engineering expenses. Expansion in earnings during the war years, however, was held down by wage and salary increases, overtime payments, cost of training enlarged factory personnel, expenses attributable to a strict guarding of the plant, and increased fixed charges for additional capital employed.

Working under ceiling prices and pricing formulae established in October, 1941, and with constantly in-

creased and abnormal costs, the management did a good job in maintaining production on a profitable basis.

This trend was reversed under the forces of national economic recovery, coupled with the entry of York into the air conditioning and commercial refrigeration business.

While total sales for the first nine months ended June 30, 1945, showed an increase of 21%, the full year's gain might be reduced by the cancellation of orders from the armed services.

Orders booked during the nine months period have been 25% less than during the similar 1944 period. The last quarter bookings are expected to show an improvement as the company will begin to fill civilian orders.

It is quite possible during the re-conversion period that York's sales may experience a temporary slump.

However, as, and if the transition is efficiently handled, this temporary slump may be minimized.

Full year 1945 sales are estimated at approximately \$38 million or about a 12% increase over the 1944 results. On the basis of earlier discussions of the industry's growth, and on the assumption that general industrial activity will be well maintained, it is estimated that York should be able to expand its sales 12 to 15% annually for the next five year period.

Operating Expenses

In the past five years, York has been able to control its expenses remarkably well, at the same time showing wide expansion in its operating profits.

A sizeable increase in the cost of material and labor, due to war conditions, was more than offset by the maintenance of its engineering and general expenses at pre-war levels. From 1940 to 1944, when sales increased from \$16,163,895 to \$36,106,874 (110%), operating profits grew from \$851,095 to \$3,668,065 (330%).

Moreover, ratio of operating profits (before depreciation) to gross sales almost doubled from 5.2% in 1940 to 10.7% in 1944.

York is one of the few industrial companies which experienced no strikes or plant shutdowns during the past decade. At present the company has a contract with an independent union, which won the election from an affiliate of A.F.L.

There are about 4,500 employees, half of whom work in manufacturing shops.

Most of the workers have been with the company for several years. About 500 are members of the Quarter Century Club. The company employs a large engineering staff with a ratio of one engineer for every six employees.

The long term sales record of York has shown steady growth. During the pre-depression years, sales were rising and had reached an \$18,835,000 level in 1926. After 1926, the sale of ice machinery which accounted for a large part of York's business,

was adversely affected by development of mechanical refrigerators for domestic uses. Sales steadily declined to \$7,422,000 in 1933.

Increasing and abnormal costs, the management did a good job in maintaining production on a profitable basis.

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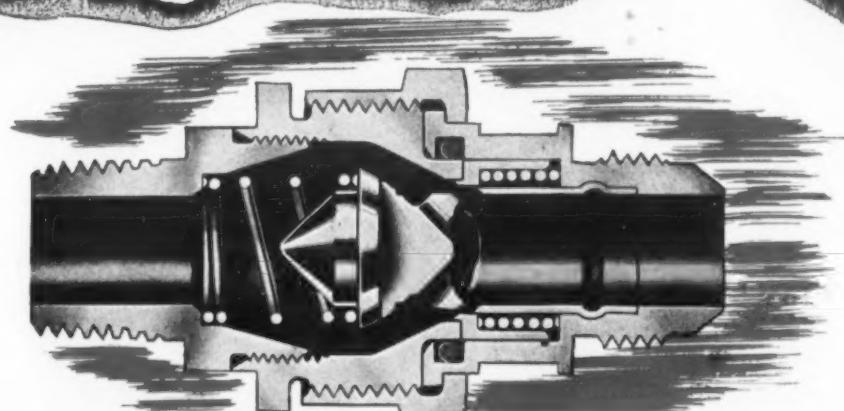
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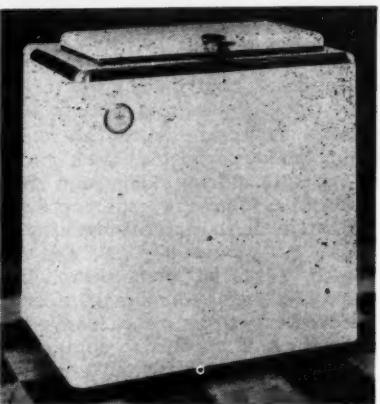
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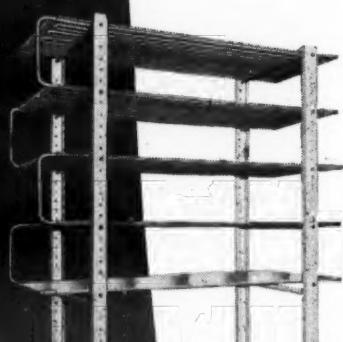
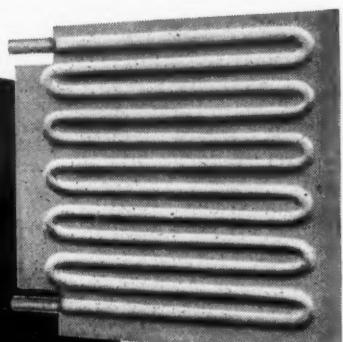


DAYTON, Ohio—First of a contemplated three-model line of home freezers has been announced by Frigidaire Division, General Motors Corp. Production schedules call for delivery to consumers shortly after Jan. 1.

First in the line is a 4-cu. ft. cabinet or horizontal model finished in white baked enamel. Outer dimensions are 36 in. high, 34½ in. long, and 24 in. wide. Storage space is 12½ in. by 24½ in. by 23 in.

Total weight is 250 pounds, and the cabinet is powered by a ½-hp. sealed unit which requires slightly less than 1½ kilowatts to run the freezer for 24 hours in normal room temperature, the company claims.

In addition to this model, the Frigidaire line will include an 8-cu. ft. model style home freezer and a 5.1-cu. ft. upright model. The company also plans to include a "Super-Freeze" chest in its deluxe household refrigerator, it was announced.



RECENT LEGAL DECISIONS Affecting Refrigeration & Air Conditioning Fields

Approximately 90% of all lawsuits involving companies or individuals in the refrigeration, appliance, and air conditioning fields result from a lack of knowledge of the elementary principles of modern law, declares Leo T. Parker, Cincinnati attorney who analyzes and writes on litigation in various industries.

Mr. Parker in this series of articles reviews some of the more recent higher court decisions on lawsuits which have involved business matters and practices in the refrigeration, appliance, and air conditioning fields.

Implied Guarantee

An implied guarantee arises under circumstances where the court may imply from the testimony that a warranty exists, irrespective of the contrary contentions of the seller.

This occasion may arise when the character of a contract, or the intended use of the merchandise, is such that the purchaser is compelled to rely upon the honesty of the seller.

Under these conditions the court may imply a warranty on the part of the seller to the effect that he will supply equipment having a predetermined standard of quality and reasonably suitable for the intended purposes of the buyer known to the seller when the sale contract was made.

For example, in Johnson Oil Burner Sales Co. v. Nottke, 51 N. E. (2d) 594, it was shown that a building owner contracted with heating engineers for installation of oil burners in his building. The building owner knew nothing about such burners and before making the contract he notified the seller to this effect.

The seller's engineers prepared the contract and specifications after thoroughly examining the building owner's boiler and premises.

Later the building owner found that the equipment was not satisfactory. Also, the building owner was caused considerable expense by making repairs to his boiler after a burner explosion which blew off the doors of the boiler and loosened up the brick work.

In the subsequent suit the higher court held that there was an "implied warranty of fitness" of burners and that the seller was liable to the building owner for the expense and damage caused by the burner explosion.

What Are Permanent Improvements?

Modern higher courts consistently hold that the installation of a heating furnace in a residence is, under ordinary circumstances, a "permanent improvement." Thus the seller is entitled to a mechanic's lien on the property belonging to either a husband or wife to secure payment of the furnace and accessories, and labor.

For illustration, in Ravenna Furnace & Heating Co. v. Cotts, 22 S. E. (2d) 371, it was shown that a husband purchased a furnace in Ohio and directed installation thereof on his wife's property in West Virginia. The husband did not pay the bill and the seller sued the wife. The higher court indicated that the wife was liable for payment of an amount equal to the enhanced value of her property.

Patron Froze in Locker Room

Irrespective of the source of danger, the operator is expected by law to exercise reasonable care to safeguard all persons, invited on the premises, against injuries.

For example, in Simons v. City Ice & Fuel Co., 59 N. E. (2d) 231, reported December, 1944, it was shown that a patron entered the locker room and, after opening one of her lockers and securing the produce which she desired, she attempted to leave by the exit through which she came.

The door did not open. Thereafter she pounded the door violently with her hands and arms and pressed the emergency bell three times. Finally, after she had been in the locker room, which was kept at a temperature of 0° F. to -5° F., for approximately 25 minutes, somebody came to a door and let her out. She suffered severe injuries for which she sued the locker company for damages.

The higher court allowed her \$5,000 damages, and said that the

locker room obviously was a dangerous place and that the company officials were charged with this knowledge and owed to patrons the duty of exercising ordinary care to afford them a proper and safe means of exit.

This court, also, held that watchmen should be on duty at all times, during which patrons are permitted to enter the locker rooms to assist them to open exit doors when an emergency bell or other signal is sounded.

Crosley Names Sweeney To Engineering Staff

CINCINNATI—Appointment of D. J. Sweeney as engineer in charge of mechanical development of the research and advance development department of the engineering division of the Crosley Corp. has been announced by L. M. Clement, Crosley vice president in charge of research and engineering.

For the past 10 years, Mr. Sweeney was associated with the General Electric Co. of Bridgeport, Conn. Previous to that time, he was associated with the Radio Corp. of America in Camden, N. J., and with the Western Electric Co., in Springfield, Mass.

3 Are Appointed To Bendix Promotion Staff

SOUTH BEND, Ind.—Kenneth Davis, Robert Lowery, and Gene Hill have been added to Bendix Home Appliances, Inc., advertising staff under advertising director, Walter J. Daily.

Mr. Davis severed a 15-year alliance with General Electric, which started in 1930 at Cleveland, Ohio. During the last six years he served in the capacity of supervisor of media in Bridgeport, Conn.

Mr. Lowery joins Bendix after 10 years association in the graphic arts and advertising fields, spending the last three and one half years with the Kawneer Co., Niles, Mich. At Kawneer, he functioned as advertising assistant in the store-front division and also as editor and publisher of their employee house organ.

Mr. Hill is not new in the Bendix organization. He was transferred to the advertising department from his war-time duties in the engineering department. He attended Notre Dame University as a student in the School of Commerce.

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Deepfreeze Gives Its Viewpoint On Future of the Home Freezer

Plenty of Selling Seen Needed To Make It Compete With Other Items

NORTH CHICAGO, Ill.—"Business never came in 'over the transom' for a new major home appliance in the past—no matter how much it had to offer—and there's no reason why home freezers should be an exception."

That is the nub of Deepfreeze Division of Motor Products Corp. thinking on the long-time future of the market for home freezers. This thinking has been incorporated in a booklet sent out by G. H. "Rock" Smith, Deepfreeze vice president and general manager, in response to requests from appliance distributors and dealers all over the country who

have asked the company's views on the business.

Frozen foods are here to stay—and to progress in a big way, the booklet points out. More than 300 concerns are now packing frozen foods, 40,000 stores are selling them. Since 75% of all American foods are perishable, it is estimated that eventually 65% of all perishable foods will be preserved by quick freezing, and that by 1955 frozen food sales may reach 11 billion dollars annually.

The electric refrigerator succeeded the icebox, and the washing machine outmoded the tub and washboard, but home freezing is a basically new service which had no predecessor in the American home.

Farm and locker plants started it for economy reasons, said the Deepfreeze booklet, but city dwellers have adopted it, because it means a better way of life. The woman who was lucky enough to have a home freezer when rationing started may have looked upon it at first merely as a hedge against food shortages for the duration. But as she has lived with it she has gradually changed her basic habits.

"The habits of the American home, the work of the American housewife, and the activities of the American family revolve largely around the stomach and the necessity of keeping it filled. That's why any development which helps solve America's food problem is 'here to stay,'" says the booklet.

"Home freezing gives the family better food in greater variety. The monotony of leftovers is banished forever. We no longer eat foods to save them. Instead we save them until we're hungry for them again," continues the statement.

"It gives the missus more freedom and flexibility. It earns its own keep. It is the beautiful way, the easy way, the economical way—it is nature's way of preserving food."

It looks like a picture where you can't miss—take out a franchise, hang out a shingle, call in a policeman to keep the customers in line, and bank the profits—but it isn't that simple, says the Deepfreeze management.

The reason it isn't so simple, it continues, is that the average family has a big list of things that it will buy ahead of home freezers unless the folks who make home freezers and folks who sell them are in there pitching from the go signal.

"Yes, it's going to take an educational job," says the folder. "After the honeymoon is over, the business is going to level out."

The Deepfreeze statement points out that while a couple of hundred companies may start out to manufacture home freezers, only a relatively few will stick it out to produce in volume. It discusses at some length the place of the "specialist" company making one product versus the company who is producing a variety of items.

Army Reports Complete Success With Quick-Frozen Milk; Civilian Use Seen

WASHINGTON, D. C.—Research carried out by the Veterinary Division of the Office of the Surgeon General has perfected a method of "quick-freezing" milk, enabling hospital ships to serve wounded soldiers a fresh and appetizing beverage whose bacterial count is lower than that in the milk supply of the average American home.

Brig. Gen. R. A. Kelser, director of the Veterinary Division, said the studies were put under way as the result of "countless requests" from hospitalized soldiers for fresh milk.

General Kelser said that his research workers soon found that if milk were frozen slowly there was

a tendency for the fat to be thrown out of emulsion and for the milk to be broken down into its constituent parts. The resultant liquid was unsatisfactory when thawed out.

Experiments showed, however, that if the milk were frozen with extreme rapidity at -20° F. it froze in tiny crystals, and as a result the milk thawed in its original condition.

Containers in which to package the quick-frozen milk presented a problem. The Army Medical Department frowned on bulk containers because of the danger of contamination.

Finally it was discovered that the milk could be satisfactorily frozen

in waxed paper containers, with 12 of the containers or cartons placed in a special paper carton.

About 30,000 pints of milk, frozen by the new process, are now being shipped each month for use on ships that are returning wounded and sick men from combat zones. Overseas hospitals are receiving shipments in ever-increasing volume. About 400,000 pints a month have been shipped for general use by American troops in Alaska.

Although, in some instances, the milk has been kept in the frozen state for three months, it tastes, when thawed, as fresh as if it had just come from the cow, according to Army spokesmen.

The Army's system has suggested interesting peacetime applications of the new process in supplying civilians far from dairy sources.

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923 W. Lake St., Chicago 7, Ill.

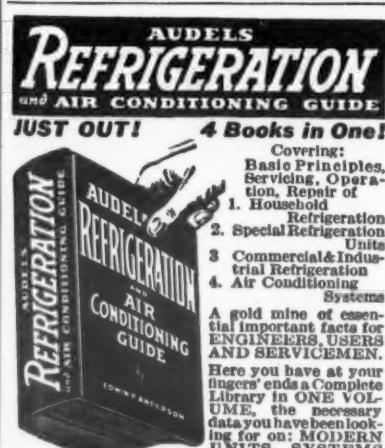
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Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

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For General or Exact Replacement. Replaces controls on Grunow and Mohawk Refrigerators. Equipped with overload coil.

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One piece, OKAY Plate Coil. Attractive modern design. Some available this year—huge production after the war. Order now! Get ready to meet the tremendous demand for dependable, economical Home Lockers!

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WRITE TODAY!

Huge Market for Commercial Refrigeration Seen in Food Retailers' Improvement Plans

Trend to Self-Serve Units Indicated in Survey; Many Will Purchase Frozen Food Display Cases

NEW YORK CITY—Four out of five independent retail food merchants will improve their present stores or build new establishments as materials become available, and purchase of new refrigeration equipment ranks high in their plans.

This information was gathered in

a nationwide survey conducted by *The Progressive Grocer* magazine. Food merchants have in mind as they plan modernization the following four objectives:

(1) To improve and extend self-service, (2) improve quality and increase efficiency in the sale of

perishables (meats, produce, dairy products), (3) to make stores more pleasing to consumers, and (4) to attain a low cost of operation in order to be competitive under any circumstances.

The survey was conducted by direct mail, with questionnaires sent to a complete cross section of independent grocery and combination food stores and markets. Stores of all sizes and types, located in every kind of community and trading area, are represented. Usable replies totaled 2,754.

Comments made by food store operators upon being interviewed in *The Progressive Grocer* survey were many and varied.

DISPLAY CASES NEEDED FOR FROZEN FOODS

"There will, in my opinion, be an urgent need for display cases holding a low temperature for all kinds of frozen foods," stated the owner of a combination store in New York state, population of the city 10,000 to 100,000. "I look for real advances in the field of frozen foods."

A West Coast combination store proprietor in a city of 10,000 to 100,000 people was quoted as saying:

"I will install complete self-service meat and vegetable departments. I intend, also, to enclose our open front store and add air conditioning to our complete food market."

"I have a country store with a

locker plant, and I have definitely decided to follow the frozen food industry very heavily. With Rural Electrification Administration definitely assured for our entire territory, I can visualize practically a 100% buy on home freezing units. This will force me to enlarge my capacity for storage and larger processing rooms." So said a North Dakota general store owner in a town with less than 2,500 inhabitants.

Forseeing the necessity of cutting expenses to compete with complete self-service chains, the operator of a large independent combination store in a Massachusetts city, population over 100,000, states:

PRE-WRAPPED FOODS

"Our store has already been modernized. We plan on enlarging and modernizing our frozen food display facilities in the near future, however. In our own mind it is one of the most important recent food developments, and one the public will be accepting in greater quantities as time goes on," said a combination store owner in an Iowa town of over 100,000 people.

lockers," was the comment of a combination store proprietor in a Colorado town, populated by 2,500 to 10,000 people.

A southern grocery store operator in a town claiming a population of 2,500 says, "I believe a combination meat and produce case would be desirable for country store and filling station use. Apples, oranges, and lemons sell the year around, but dry out badly in hot weather when not on ice. Bologna, bacon, cheese, and other lunch meats can be sold almost any place in summer if refrigeration is available. Small places cannot afford two separate boxes."

EXPAND FROZEN FOODS

"Our store has already been modernized. We plan on enlarging and modernizing our frozen food display facilities in the near future, however. In our own mind it is one of the most important recent food developments, and one the public will be accepting in greater quantities as time goes on," said a combination store owner in an Iowa town of over 100,000 people.

One general store proprietor in a Florida small town declares he will build a completely new establishment. He says:

"My plans are to build a new building and put in a complete line of electrical appliances and equipment, including refrigerators, radios etc."

What They'll Buy

WALK-IN COOLERS

When questioned as to their intentions of including walk-in coolers in improvement and expansion plans store proprietors replied, as follows:

Interest	Plan To Buy	But Not Decided
Combination stores ..	16.4%	11.4%
Grocery stores	1.0	1.1
General stores	10.5	12.0
All types	14.3	11.4

Of Stores Surveyed

In Towns (Population)	Interest	
2,500 or less	11.5%	12.0%
2,500 to 10,000	15.7	10.3
10,000 to 100,000	18.1	13.8
More than 100,000	14.2	7.9

In Towns (Population)	Interest	
All stores	14.3	11.4

When the total number of walk-in coolers to be purchased by the stores surveyed, stores in towns of 2,500 or less population will buy 30.4%; those in towns of 2,500 to 10,000 will purchase 22.5%; those in cities of 10,000 to 100,000 will buy 30.2%; and those in the larger cities, population 100,000 or more, will purchase 16.9% of the total number.

STANDARD MEAT CASES

Standard-type meat cases were among the wants of store owners surveyed in the following proportions:

Interest	Plan To Buy	But Not Decided
Combination stores ..	12.6%	8.4%
Grocery stores	1.0	0.7
General stores	13.2	7.6
All types	12.3	8.0

Of Stores Surveyed

In Towns (Population)	Interest	
2,500 or less	10.7%	7.7%
2,500 to 10,000	13.0	9.1
10,000 to 100,000	14.3	8.9

In Towns (Population)	Interest	
More than 100,000	12.8	6.1
All stores	12.3	8.0

When the total number of standard meat cases to be purchased, according to *The Progressive Grocer* survey, was subdivided in regard to population of towns, the results were: 28.0% in towns of 2,500 people.

(Concluded on next page)

INSULATING FACTS

FOR COLD STORAGE AND LOCKER PLANT OPERATORS



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• Whether you are building or remodeling your cold storage or locker plant, you'll find valuable information in this "HAND BOOK ON COLD STORAGE CONSTRUCTION." It tells how to figure heat loss, how to estimate amount of insulating material needed for a job. It gives helpful details on construction and vapor-proofing. It also explains in detail how and why Redwood BARKWOOL gives you these nine vital advantages:

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Retail Food Merchants Announce Plans For Improvement of Stores & Services

(Concluded from preceding page)
or less; 22.8% in towns ranging from 2,500 to 10,000 people; 30.0% in cities ranging from 10,000 to 100,000 people; and 19.2% in cities of 100,000 or more people.

SELF-SERVE MEAT CASES

Open, self-serve type meat cases were desired by a smaller percentage of the stores surveyed.

Plan To Buy	Interested	But Not Decided
Combination stores ..	6.1%	6.5%
Grocery stores ..	0.1	0.3
General stores ..	2.5	3.8
All types	4.8	5.5

Stores in towns of 2,500 or less population will buy 19.0%; those in towns of between 2,500 and 10,000 subscribe for 19.0%; those in cities ranging from 10,000 to 100,000 will want 39.8%; and those in the larger cities, population more than 100,000, will buy 22.2%.

WALL DAIRY CASES

Wall-type dairy cases were among the wants of store owners surveyed in the following proportions:

Plan To Buy	Interested	But Not Decided
Combination stores ..	11.0%	8.8%
Grocery stores ..	0.7	0.7
General stores ..	4.2	6.0
All types	9.2	7.9

When the total number of wall-type dairy cases to be purchased was subdivided in regard to population of towns, the results were: 25.7% in towns of 2,500 people or less; 21.6% in towns ranging from 2,500 to 10,000 people; 25.4% in cities ranging from 10,000 to 100,000 people; and 27.3% in cities of 100,000 or more people.

SELF-SERVE CASES (FROZEN FOOD)

Display or self-service type of frozen food cases were preferred, or wanted in addition to the other type, as follows:

Plan To Buy	Interested	But Not Decided
Combination stores ..	14.3%	13.0%
Grocery stores ..	0.7	0.7
General stores ..	7.8	10.5
All types	12.2	11.7

Of Stores Surveyed
In Towns (Population)

In Towns (Population)	Plan To Buy	Interested	But Not Decided
2,500 or less	8.1%	10.4%	
2,500 to 10,000	12.8	11.2	
10,000 to 100,000	14.5	12.6	
More than 100,000	17.8	14.2	
All types	12.2	11.7	

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All types			

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Now that replacements are hard, almost impossible to get, those charged with the responsibility of maintaining existing equipment are looking for longer operative life and reduced operating costs.

Aminco Oil Separators protect compressors by maintaining correct oil level in crankcase and by excluding oil from refrigerant stream they enable coils, condensers, valves and dehydrators to function most efficiently.

These oil separators are made for jobs from $\frac{1}{2}$ H.P. to 120 tons and are used everywhere, ashore or afloat, where efficient refrigeration is desired.

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When recharging our new Dehydrator, simply remove the inlet plug—back out the slotted inlet screen tube—shake out the exhausted agent, then replace with new.

In addition to this convenient feature (see illustration above) Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.

Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.

With the MBCO. CONE SCREEN OUTLET, such fine crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.

In addition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.

Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.

MUELLER BRASS CO. PORT HURON, MICH.

Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.



Use and Care of Tools (Part Two)

Good tools do not have to be babied. If they are well designed and of good materials, they will stand rough treatment. Their makers expect them to be used hard. On the other hand, tools can be and often are, badly abused.

ABUSE OF TOOLS

Do not use wrenches or pliers as hammers, nor screw drivers as chisels.

Use wrenches that fit; if they are too loose they will slip and damage both themselves and the nut or bolt. Sometimes a nut or capscrew will stick, so that, to loosen it, the wrench must be hammered, or its length extended by a piece of pipe. So doing overloads the wrench, and it may break or bend.

Before cutting a piece of two-wire electric cord or cable with pliers, be sure the current is off; otherwise you will burn a hole in the jaws of the pliers.

Use the correct size screw driver and avoid damaging either or both the screw-slot and the screw driver.

When cutting wood or insulation, watch for nails, screws, or wires, that will badly damage the thin, soft cutting edge of wood-working tools, such as saws, bits, planes, and chisels.

Keep hacksaw blades tight in the frame; loose blades break more easily.

Cutting pliers are made to cut copper, soft iron, or other comparatively soft materials. Avoid hard metals or larger pieces than the pliers were designed for.

When putting on a gauge, start it finger tight, then tighten it by a wrench on the shoulder of the connection; do not tighten it by turning hard against the gauge case.

Be careful not to use a pressure gauge on pressures above the maximum pressure shown on the gauge dial.

Pressure gauges are provided with a small orifice to dampen sudden pulsations that are extremely injurious to the gauge mechanism; but it is usually necessary to "crack" the valve stem to keep the gauge pointer from being wildly agitated.

Some service men like to use a restrictive fitting between the gauge and the valve in which it is mounted, so as to further protect the gauge. Manufactured manifolds have small valves that can be adjusted to restrict and further dampen pulsations.

Many other precautions against damage to tools and gauges will occur to the careful mechanic.

CARE AND MAINTENANCE OF TOOLS

After using, tools should be wiped reasonably clean and dry. Some tools, such as gauges, thermometers, calipers, and edge tools, should be wrapped or otherwise protected

against injury instead of being thrown in with other tools. The threads of gauge connections, taps, dies, and bits, should be cleaned to free them of dirt and cuttings, and protected by a cap or wrapper. Files should be cleaned with a file-card, or a piece of sheet copper.

Remove the valve from small service cylinders occasionally and clean the cylinder out. See that the valve stem packing is in good shape and replace it if necessary.

Clean out torches and leak detectors, both the tanks and the burners. Renew the copper ring in the leak detector when it begins to look considerably eaten away.

DAMAGE TO THE EQUIPMENT BY IMPROPER USE OR SELECTION OF TOOLS

Be careful not to mar or damage the equipment by using the wrong tool on it. You or someone else may bitterly regret it later when service is again needed.

Use a solid wrench in preference to pliers or an adjustable wrench.

Use a socket wrench or a box wrench in preference to an adjustable wrench.

Do not use pliers or an adjustable wrench on valve stems; use a regular valve stem wrench, preferably of the reversible ratchet type.

It seems almost unnecessary to warn against using a pipe wrench on valve stems, capscrews, nuts, or adjustment stems.

Use hammers, cold-chisels, drifts or punches sparingly.

Fit parts, do not drive them.

Start threads finger tight; cross-threading usually results if the nut is started by a tool.

Use oil instead of force.

Tools are a mechanic's helpers, his companions that will help him best if they are well treated. Use the right tool for the job; use it right and take care of it.

COLD FACTS BY ANSUL



FREEZING THE MUD BEATS PUMPING IN SOME WET EXCAVATION JOBS. REFRIGERANTS CIRCULATED THROUGH PIPES DRIVEN THROUGH THE MUCK AROUND THE DIGGING AREA HELP CONTROL EXCESS WATER.

MODERN REFRIGERATION FINDS EVER NEW USES.. BUT FOR REFRIGERANTS YOU CAN'T BEAT THE OLD STANDBYS.. ANSUL LIQUID SULFUR DIOXIDE — ANSUL LIQUID METHYL CHLORIDE .. IMMEDIATELY AVAILABLE.

Our technical book, "Ansul Refrigerants" (3rd Edition) available upon request.

ANSUL CHEMICAL COMPANY, MARINETTE, WIS.
"Now in our 30th year"

AGENTS FOR KINETIC'S "FREON-11", "FREON-12" AND "FREON-22".

Illinois Firm's Entry In Home Freezer Field

One of the "Polar Freez" home and farm freezers being manufactured in 8, 12, and 16-cu. ft. sizes by Schelm Bros., Inc. of East Peoria, Ill. Production of these units is now underway.

**Marshall Field Co.
Plans Big Section
For Frozen Foods**

CHICAGO—Expansion of Marshall Field's small frozen foods section known as "The Pantry" on the ninth floor into a full department is planned as soon as both equipment and supplies are available in sufficient quantity to justify full-scale merchandising, it was recently announced.

Opened a year ago merely as an experiment, the section is doing a business limited only by the available merchandise.

"Honor Brand" frozen fruits and vegetables, and "Frigid-Dough" frozen bakery products are featured. Sale of frozen meats and poultry, both domestic and game, will be resumed whenever supplies again become available, it was reported.

**New Frozen Foods Firm To
Specialize In Poultry**

ESCONDIDO, Calif.—Building permit has been issued for construction of a modern plant here for the processing and freezing of chickens, turkeys, and other poultry. It will cost \$33,000, will employ 50 people, and will be operated by the Escondido Products Co.

**Schelm Sells Freezers
On National Scale**

EAST PEORIA, Ill.—W. H. Schelm, president of Schelm Bros., Inc., has announced that national distribution to dealers of "Polar Freez" cold storage food cabinets began Sept. 1.

Production of "Polar Freez" units in 8, 12, and 16-cu. ft. sizes has begun for both domestic and commercial users. In addition, Schelm will build the former Hall air conditioning units, furnace blowers, and attic fans.

The Chicago sales office of the firm, located at North Shore National Bank Building, 1737 Howard St., is at present engaged in assigning nation-wide distributorships for the Schelm line.

The firm has just completed three years of specialized war work under contract with the War Department, assembling assault boats and ammunition trailers.

**\$200,000 Frozen Foods Plant
Planned In Los Angeles**

LOS ANGELES—Consolidated Frozen Food Corp. has been formed in Los Angeles, with a capital of \$200,000. Directors are: Reed E. Callister, of Glendale, Calif.; and William M. Steward and Earle E. Swem, both of Los Angeles.

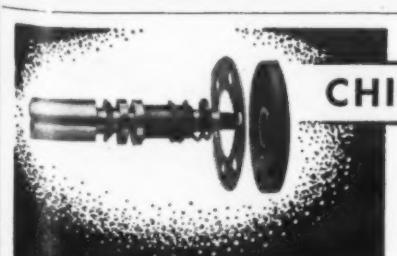
ONE SERVICE MAN TELLS ANOTHER



ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

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Chicago Seals are best for Coldspel. Only Chicago Valve Plates have replaceable valve seats.

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WITH FOUR OUTSTANDING ADVANTAGES

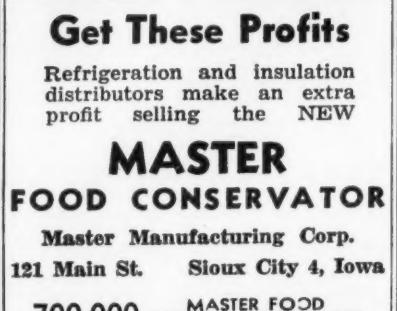
1. No water drip or condensation.
2. No excessive dehydration or sliming.
3. Controlled air flow.
4. Even distribution of cooled air.

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'Short Course' at State Universities To Train Veterans and Others In Locker Plant Work

First School May Be Opened Next Spring
At Ohio State; Associations Sponser It

By Phil B. Redeker

CHICAGO—Future operating personnel of refrigerated locker storage plants may get their training in "schools" that will be held at state institutions of learning, under the sponsorship of the Frozen Food Locker Supplies and Manufacturers Association, and the National Frozen Food Locker Association.

It is likely that the first of these schools will get underway next spring at Ohio State university. The staff of the Ohio State college of agriculture has offered its facilities, and committees from the association are to work out details of the program with the staff.

There are two main purposes behind this idea of a school for training locker plant operating personnel. One is the general need for a training program to teach the techniques of a business that is so relatively new that there are few experienced hands available.

Second general purpose is to offer training opportunities for returning veterans of the armed services to train themselves for opportunities in the refrigerated locker plant field.

The associations and individual

members reported widespread interest among GI's in the locker plant business, with the result that a need seems evident for directing this interest into a channel whereby the veterans can learn something about the field.

The agricultural schools or departments at the state universities have facilities and the staffs of instructors available to teach the courses. A committee from the Locker Manufacturers and Suppliers Association inspected the facilities at Ohio State university and expressed themselves as more than satisfied that they would fill the bill. However, it is recognized that members of the industry will have to contribute some of their knowledge, and also perhaps some equipment in order to round out the course and make it complete.

Prof. H. D. Brown of the college of agriculture of Ohio State university attended the recent meeting of the Locker Manufacturers and Suppliers Association in Chicago, and described some of the facilities and gave an outline of the course.

There are laboratory facilities and

equipment for studies in meat slaughtering, poultry freezing, meat and fruits and vegetable processing by freezing. There are also cold test rooms for studies in a study on the operation of cold rooms.

The university's staff on accountancy and business operations could provide courses on the business management of the locker plants. However, Prof. Brown requested that the industry supply speakers who would cover some of the actual operating problems of locker plants.

Prof. Brown said that the instruction would be offered in what is known as a "short course" of 11-weeks' duration, with full-day classes. Part of the time would be given over to classroom instruction and lecture, and part to two or three-hour laboratory periods in which the students would engage in the actual processing work and operating the equipment that is found in a locker plant.

The tuition fee for such a course would probably be about \$60, Prof. Brown indicated. Students would also have to pay for their own board and lodging, and incidental expenses.

Louis Uhrig, president of the National Frozen Food Locker Association, declared that most of the present plant operators favored such a school.

Oklahoma's Law on Locker Plants Sets Proper Temperatures

OKLAHOMA CITY, Okla.—Oklahoma's new locker plant law, in effect now, contains specific regulations covering temperatures to be maintained, a section dealing with toxic refrigerants, and a restriction on the kind of food that can be stored in public locker plants.

Section 11 provides that the locker plant's refrigeration system must be equipped with accurate controls for the automatic maintenance of the temperatures required.

The controls must be able to buck conditions of extreme outside temperatures and peak load conditions within, and still hold the following temperatures:

In the chill rooms (holding rooms), temperatures of 34° F., plus or minus 2°, with a tolerance of 5° for a reasonable time after fresh food has been put in for chilling.

HOW COLD?

In the sharp freeze rooms or compartments, 10° or more below zero F., or 0° F. or lower when forced air circulation is used, with a tolerance again of 5° for either type of installation for a reasonable time after fresh food has been put in for sharp freezing.

In locker rooms, 0° F., with a tolerance of 3°.

The same section calls for direct-reading thermometers in the chill and sharp freeze rooms, and for accurate self-recording thermometers in the locker rooms, of a type that must be approved by the state commissioner of health.

Section 8 rules that any plant using a toxic gas refrigerant must keep at least one gas mask ready for emergencies.

Section 7, set up perhaps as a bar against locker users who might plead that all that meat was just pointless old stuff being saved for Rover, states that only food intended for human consumption can be stored in locker plants. Exception can be made only upon order from the state health commissioner.

The Oklahoma act covers the other aspects of licensing, construction, finish and equipment, inspection, and sanitary regulations in line with the pattern set by the Illinois act in 1942.

It also makes a requirement initiated by the state legislature of Utah in its locker plant act: The state board of health must pass on any proposed locker plant plans before construction can begin.

\$25,607 Bid Is Winner For Providence Plant

PROVIDENCE, R. I.—A quick freezing plant and a cold storage room, capable of freezing 3,500 pounds of food daily, and storing 300,000 to 400,000 pounds, will be installed in the basement of the general store at Howard. Low bidder for the project was the Commercial Freezer Corp. of Providence, with a figure of \$25,607.

Van Nuys, California, Plant Will Cost \$16,000

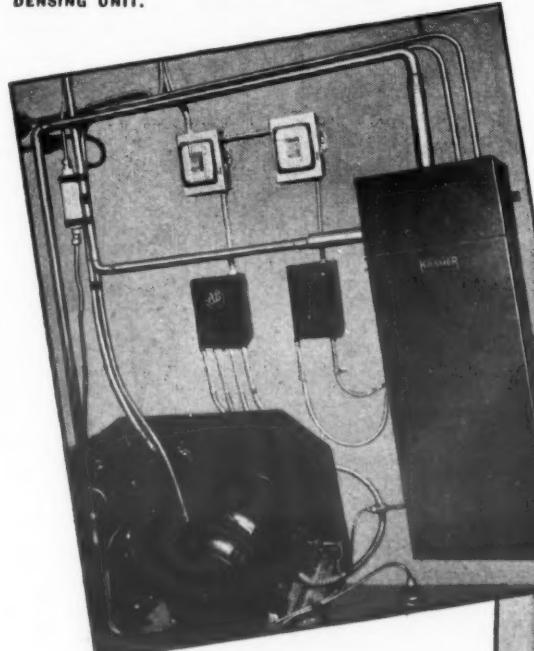
VAN NUYS, Calif.—Plans are being completed for the construction of a frozen food storage building and locker plant at 21229 Sherman Way here for Charles Bader of 4650 Sepulveda Blvd.

The concrete and masonry structure, with lockers and refrigeration equipment, will cost \$16,000. It will cover an area of 110 by 148 feet.



HASCO, INC.
GREENSBORO, N. C.

INSTALLATION SHOWING THERMOBANK AND DEFROSTING CONTROLS WITH CONDENSING UNIT.



NO ELECTRIC HEATERS
NO BRINE SPRAY
NO WATER SPRAY

With the Thermobank a low temperature system is just as automatic as a 40° system.



THERMOBANK EVAPORATOR INSTALLATION
IN MINUS 20° F. ICE CREAM HARDENING
ROOM.

Write for
Bulletin T-V-345N

KRAMER TRENTON COMPANY
Trenton, New Jersey

Grocer or Butcher Who Plans To Install Lockers Should Offer 'Complete Service'

Third of All Successful Locker Plants Now Operated in Conjunction With Food Stores

CHICAGO—A third of the nation's successful locker plants are being operated in conjunction with retail groceries or meat markets, but the grocer or butcher who is considering adding a locker plant must be prepared to offer "complete service," advises Albert Guggedahl, executive secretary of the National Frozen Food Locker Association.

In a statement prepared for the National Association of Retail Grocers, Mr. Guggedahl suggests grocers and meat market operators "look upon the locker plant business as capable of standing 'on its own feet,' and avoid the philosophy that you must go into it to protect your present business."

COMPLETE SERVICE VITAL

Complete service is now looked upon by locker plant operators as a requisite to properly serve patrons, and is also a necessity for income, declared Mr. Guggedahl.

Rental of lockers alone, without service, affords small margins of earnings, charges for services bring regular revenue, though they must necessarily be within reasonable limits, so patrons will realize value received," he said.

"The early and pioneering locker plants offered only a storage service. Sooner than he expected, the locker plant owner met the demands of patrons to furnish additional services:

"(1) chilling rooms for meat carcasses, (2) cutting and grinding meat to the patron's order, (3) adequate wrapping by moisture-proof materials for quick freezing and storage, (4) quick freezing of meats, fruits, and vegetables, (5) lard rendering, (6) smoking and curing hams and bacons, and (7) in many localities the service includes merchandising on a small scale of com-

mercially packed frozen fruits for the convenience of the patron.

"Individual locker box rentals vary from \$10 to about \$18 per year, dependent upon size of locker, location, type, and design," continued Mr. Guggedahl. "In some sections of the nation, lockers are called 'food cupboards,' with capacity from 16 cu. ft. up to 30 cu. ft. The customary steel constructed lockers range from 4 1/2 cu. ft. to 7 cu. ft.

"Service charges for chilling, cutting, wrapping, and quick freezing are customarily, nation-wide, in the bracket from two cents to three cents per pound for meats. Fruits and vegetables are often packed by the patron, in cartons provided by the locker plant. Cartons are sold at little or no profit, and the charge for quick freezing is quite low. It is pointed out that variation in types and class of services offered effect rates in corresponding ratio.

WHAT OPERATOR SHOULD KNOW

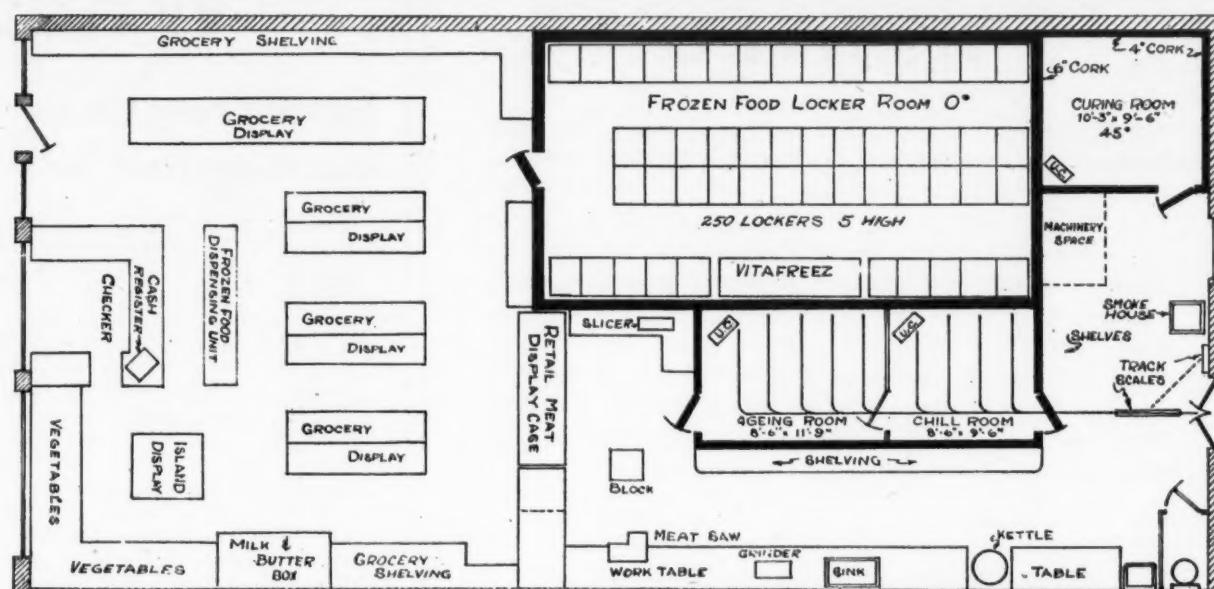
"Serious study and attention are recommended prior to entering the frozen food locker business," Mr. Guggedahl advises grocers and butchers.

"(1) The operator should have knowledge about meats and proper care. The business also involves 'service to the patron,' and the prospective locker plant owner should be service- and sales-minded.

"(2) Costs must be checked. The average, at this time, for complete installations varies from \$30 to \$50 per locker, not including the building and grounds. Thus, a plant of 300 lockers will involve an investment of \$9,000 to \$15,000.

"(3) Survey the community as to its needs for a locker plant, including a canvassing and listing of number of prospective patrons within the trade territory of that community.

How a Locker Plant and Grocery Store Combination Is Set Up



Layout of a combination locker plant-retail food store, in this case apparently a store of the semi self-service type. It is estimated that one third of the nation's locker plants are now operating in conjunction with some kind of a food retailing setup. The heavy lines enclose the insulated rooms in the locker plant part of the building.

"(4) Visit nearby locker plants, see the set-up and facilities. Discuss with owner the possibilities in the business.

"(5) Contact experienced and reliable contractors, assuring yourself on recommendations as to size of plant, the layout, the equipment. Compare several contract estimates, and consult local bankers and investment people before entering into contracts and financial obligations.

"It is estimated by national and state locker leaders that the number of plants [nearly 6,000] will increase 100% within the next few years," said Mr. Guggedahl. "Certain it is that rural and urban patrons alike recognize the services of locker plants from the standpoint of conservation of food availability of fresh foods at all seasons of the year by the quick freezing process, and the economies of providing their own food supply in several varieties. . . .

"The locker plant of tomorrow is

in an excellent position to ship in large quantities of such foods, storing them in refrigerated rooms and making them available to its patrons.

"Essentially, the locker plant will remain a service institution," believes Mr. Guggedahl. "The exclusive locker plant will seldom broaden its field to include retailing of foods, generally. Retailers need not be alarmed over possible competition from locker plants, in their field."

\$50,000 Georgia Plant

MILLEDGEVILLE, Ga. — Announcement of plans to build a new locker plant here costing approximately \$50,000, have been made by Charles Pennington.

Mr. Pennington also said that in addition to the various processing and storage rooms, the new plant will include a modern market.

New Protector & Depth Gauge Ends Drill Breakage!



DIMPLES DRIVE DRILL CLOSE TO POINT WHERE WORK IS BEING DONE

GAUGE CONTROLS DEPTH OF HOLE... SPEEDS UP DRILLING TIME



NOW YOU CAN DRILL FASTER—AND NOT WORRY ABOUT DRILL BREAKAGE! The Hartwell Protector & Depth Gauge protects drills at their weakest point, prevents them from bending or breaking. Equally important, it controls depth of hole or travel of drill.

The Hartwell Protector & Depth Gauge improves drilling accuracy... saves drills... cuts drilling costs... reduces lost time on the job. Its rounded nose protects the drilled surfaces.

The Hartwell Protector & Depth Gauge is available in 15 sizes from 1/16 through "F." Sizes 1/16 through 10 are held to 1/4" o. d. to fit standard drill chucks. Larger sizes are held to 3/8" o. d.



ASK YOUR JOBBER about the new Protector & Depth Gauge

Single source for 779 production parts and tools

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Designers • Manufacturers • Distributors

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Dallas, Texas • Kansas City, Kansas

SERVE-SELF STORES NEED SHERER Self Service REFRIGERATOR DISPLAY!

Proven successful operation!

Boosts store traffic!

Builder-upper of extra sales!

PROFITABLE FOR DISTRIBUTORS

The modern retail food store is headed towards self-service... needs self-service produce and dairy displays to get maximum volume and profit. Commercial refrigerator dealers must have them to sell.

Smart are those distributors who have planned to go ahead with Sherer. They know that Sherer self-serve display and storage cases for produce and dairy products are the best to be had—designed for the job, efficient in performance, economical in operation.

VEGETABLES... DAIRY CASES... REACH-IN REFRIGERATORS... WALK-IN COOLING ROOMS... MEAT AND DELICATESSEN DISPLAY CASES... FREEZERS... all are included in the Sherer franchise.

SHERER
REFRIGERATOR PRODUCTS
SHERER-GILLETT CO., Marshall, Mich.

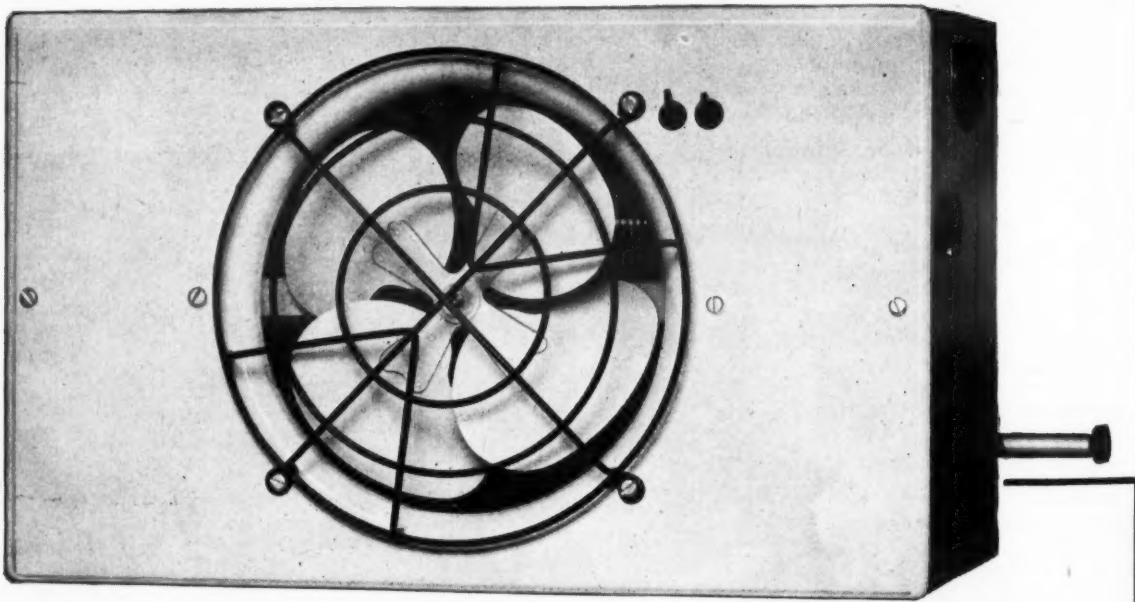
WANTED

Air conditioning and ventilation engineer to assist department head with correspondence, supervision of design, purchase requisitions and reports for cooling and ventilating systems involving duct work, supply and exhaust ventilating fans, air conditioning and cooling plants for commercial, industrial and power plant buildings. Position is with a large well known engineering and construction company, with home office in New York City. Applicant should have not less than five years of practical experience and must have ability as a correspondent and knowledge of drafting room procedure. State experience, salary expected, availability. This position offers definite advantages for the post war period.

Box 1803

Air Conditioning & Refrigeration News

New! FILTERPURE Ceiling Reach-in Units



-with These 4 Important Features:

1. COMPLETE AIR PURIFICATION

The patented and exclusive Filterpure method allows the storage of all types and kinds of food without contamination or odor.

3. CONTROLLED AIR MOVEMENT

Positive air circulation provides a temperature difference from top to bottom of only 1°.

2. HIGH HUMIDITY

Ample coil surface combined with correct air volume results in a humidity in excess of 90%.

4. NO SHELF CUTOUT

The unit is so compact that it is installed above the first shelf.

Let us send you complete information about our new line of cooling units.

For information,
Call or Write-

BETZ CORPORATION
HAMMOND, INDIANA

What's New

Portable Parts Cleaner Uses Compressed Air

DETROIT—A new portable type parts cleaning machine, which agitates the cleaning fluid by air pressure, was recently announced by the Park Chemical Co. here.

No heat is required in this new Parko unit to remove grease, grime, and carbon from machined parts, castings, gears, electrical parts, instruments, tools, etc., the company claims.

Two systems of cleaning are combined in the one unit. Large parts to be cleaned are placed in the tank and the cleaning solution is agitated by means of air pressure.

Small parts such as screws, washers, etc. are placed in the round basket and soaked in the solution for

a few minutes, the basket being revolved or swished by hand. After the parts have been cleaned, the rack is placed on an attached drain-shelf which drains the solution back into the tank for re-use.

Parts are then blown dry by means of the air gun and rinsed with water or petroleum spirits. It is only then necessary to attach this machine to the air-pressure line and it is ready to operate; there are no mechanically moving parts and no electricity is needed, the company says.

Aerosol Bomb Will Soon Fight Home Front Insects

MANSFIELD, Ohio—War-famed Bug Bomb aerosol dispensers, used by the armed services to combat malaria and yellow fever in the South Pacific and in insect-infested areas of other fighting fronts, will be available to civilians in the near future, it was announced by the Westinghouse Electric Appliance Division, developer of the dispenser in conjunction with government agencies.

"Combining the wonder-chemical,

6 Minute Dip



No distillates, which sometimes leave smelly or combustive odors, are used in cleaning filters with this process.

New Filter Cleaner Needs No Distillate

LOS ANGELES—A new process for the chemical cleaning of all types of air filters, including air conditioning, engine, marine, and aircraft, has been developed in the laboratories of Turco Products, Inc. of 6135 South Central Ave., here.

Claimed by its manufacturer to eliminate the necessity of using distillate and other materials which

Bang! and He's Dead



"Freon" provides the pressure that explodes this lethal mist into the air, introducing death to household insect pests. Each bomb holds enough aerosol under pressure to clear flies and cockroaches from 10 average sized homes. DDT and pyrethrum are the ammunition.

long-lasting DDT with the quick-acting pyrethrum insecticide, the bombs differ from other insecticide dispensers in that they release an aerosol—or fine mist—into the air to kill in seconds flies, lice, roaches, and other bugs," reported J. H. Ashbaugh, vice president in charge of the division, which during the past three years supplied the Army with 27,000,000 of the pint-sized insecticide dispensers.

"The insecticide is propelled into the air in particles so fine that there may be 100,000,000 of them in a single drop of liquid," he explained. "Freon," the same gas that creates "cold" in refrigerators, provides the pressure to expel the insecticide.

"Each Bug Bomb," he pointed out, "contains a pound of aerosol, sufficient for 12 to 14 minutes of spraying—enough to 'de-bug' 150,000 cu. ft. of space, or the equivalent of 10 to 15 average size homes. To kill mosquitoes, we recommend four seconds of spraying per 1,000 cu. ft.—equal to a room 10 ft. by 10 ft. by 10 ft."

Twelve seconds per 1,000 cu. ft. is sufficient to kill flies and larger insects, Westinghouse studies show, Mr. Ashbaugh said, while 30 seconds should be allowed to rid the average small kitchen of roaches.

Westinghouse plans national distribution of the Bug Bombs after an initial test advertising and marketing campaign is conducted in Jacksonville, Fla. The civilian product will be made only at the East Springfield Westinghouse plant.

leave an offensive odor and are a fire hazard, it is also said to shorten the time required.

Under this new process, which takes under 13 minutes, the filter is removed and immersed for only six minutes in a tank of cold Turco Aktiv, four ounces to a gallon of water. Then the filter is given a cold water hosing to flush away dirt and grease, dried in a stream of compressed air, and dipped into oil.

AUTOMATIC

Pressure, Temperature and Flow Controls
Write for Catalog 52

GENERAL CONTROLS
601 ALLEN AVENUE
Somerville, Boston • New York
Philadelphia • Cleveland
GLENDALE 1, CALIF.
Detroit • Chicago • Dallas
Denver • San Francisco

MANHATTAN V-BELTS

for satisfactory service

Important any time, but more so now, MANHATTAN Whipoord F/HP V-Belts keep home and store equipment running.

MORE POWER—grip the grooves, stop slips, uniform "pull."

LONGER LIFE—Endless cord construction resists internal heat and side wear.

SILENT RUNNING—Smooth and noiseless on high-speed drives.

THE MANHATTAN RUBBER MFG. DIVISION
of Roybestos-Manhattan, Inc.

Executive Offices and Factories . . . Passaic, N.J.

HOWELL MOTORS

ELECTRIC MOTORS FOR INDUSTRY SINCE 1915

HOWELL ELECTRIC MOTORS COMPANY • HOWELL, MICH. • REPRESENTATIVES IN ALL PRINCIPAL CITIES

'Cafeteria Style' Frozen Foods Store In Capital Suburb Is Designed To Stimulate Sale of Home Freezers

500 To 700 Customers Daily Carry Their 'Tray' To Buy Frozen Items

BETHESDA, Md.—A radical departure from the regularly established practice of merchandising food, which has passed the experimental stage, is exemplified in the retail frozen food store of the Deepfreeze Sales Agency in this suburb of Washington, D. C.

A feature of unusual interest to the store visitor is the entire absence of any visible foodstuff, as it is all placed in the 11 Deepfreeze units placed along the wall. It might be said to resemble an ice cream store. No bins or shelves filled with vegetables and fruits usually seen in a food store, but neat white freezers full of packaged frozen foods.

As a compensation for the absence of visible display of food, attractively colored decalcomanias depicting various kinds of foods are placed on the wall over the freezers. As one customer expressed it, "To look at that juicy steak, just makes me drool."

BULLETIN BOARD PRICING

The store is operated on the cafeteria plan, a bulletin board prominently displayed on the rear wall indicates the unit prices and the corresponding ration points, if any, that are required. Having decided on the purchases desired, the customer selects a tray and proceeds along the counter, is served by smart, attractive saleswomen, pays the cashier, and the transaction is completed.

A wide variety of items are offered for sale, including meats, fish, fowl, vegetables, fruits and fruit juices, as well as cooked foods, such as stew, pies, and muffins.

MERCHANDISE CARRIED

Vegetables and fruits are bought in a frozen state in retail and institutional size packages. The only other merchandise carried for sale in addition to frozen foods, is a complete line of packaging material, such as cartons, paper, twine, cellophane, etc., for owners of home freezing units who want to do their own processing.

The site chosen for the store, selected after extensive search and consideration of various locations, is a particularly good one, in that Bethesda is the shopping center for a high class residential area including the fashionable Chevy Chase section.

Customers frequenting the store represent an excellent cross-section of the community ranging from housewives in the moderate income brackets to chauffeurs of expensive automobiles whose large purchases indicate their employers have already installed freezers in their homes.

SOURCES OF SUPPLY

Merchandise is procured generally from local brokers, processors, and

**In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928**

Your letterhead will bring our latest catalog—also our House Organ.

"The Liquid Line"
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

SPECIFY...

DRYERS THAT BEAR THIS LABEL
DAVISON'S IN CHARGED OUT
SILICA GEL WITH

—the label that is your guarantee of maximum performance and satisfaction. Your jobber stocks it—for refilling and in factory charged dryers.

distributors. Several similar stores have been established in various parts of the country.

Evidence of the success of this particular store is attested to by the fact that it serves on an average of from 500 to 700 women customers a day.

Although fruits and vegetables are bought frozen and maintained at 0° F. in the dispensing units, meat is bought in the bulk and processed on the premises. It is aged at 37° F. and frozen in the freezer room at from 0° to -5° F.

Experiments are being conducted in the freezing room with both "Freon-12" and "Freon-22" refrigerants to determine their relative performance values.

EQUIPMENT FEATURES

The refrigerating equipment for the meat processing is installed in the basement and consists of two 3 hp. water cooled condensing units operating 24 standard Deepfreeze cylinders, and a single 1 hp. condensing unit used for the meat aging

compartment. The electric power bill, including lighting and all accessories, is less than \$100 a month. An ante-room to the freezer is cooled entirely by the spill from the freezing room, no cooling coils being installed therein, and a temperature of 37° F. is maintained.

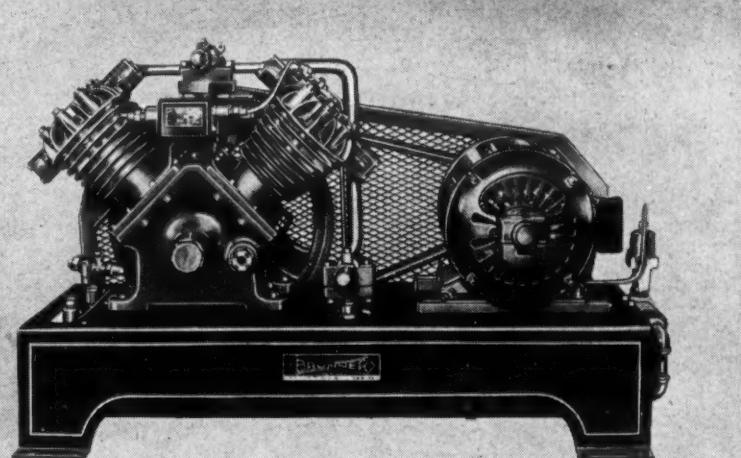
IT IS THE OPINION OF THE DISTRIBUTOR

of the refrigerating equipment that such a store has been and will continue to be of inestimable value in stimulating the sale of food freezing equipment, an opinion verified by the large number of orders they already have on hand, pending their ability to procure the material.

EFFECT OF COMPETITION

In answer to an inquiry as to the effect of the store operation on their neighborhood competition, the following incident was related as being indicative.

A neighboring grocer, who previously sold only a small amount of frozen foods, advised the Deepfreeze sales agency that he was going to cut his prices and undersell them on all competitive articles. No attempt was made to meet this competition and, after a short time, the grocer reinstalled his former prices and all was serene.



Your refrigerated case is only as good as its condensing unit

Regardless of beauty of design—streamlining—or modern lighting—the utility of refrigerated show cases is only as efficient as their condensing units. So, if you are contemplating the purchase of refrigerated show cases, make sure that they are equipped with reliable, proper capacity condensing units—Brunner Condensing Units! Brunner Units are backed by 37 years of specialized experience in the design and production of compressors. Thousands of Brunner Condensing Units are giving efficient and economical service not only in our country, but all over the world. And small wonder, look at how they are made!

Following its assembly, every Brunner Compressor is run for 24 hours in an air-conditioned room and then disassembled and every part inspected. It is then reassembled and tested again.

Initially only the finest materials are used and the closest tolerances are maintained in their manufacture.

Brunner engineering has not only kept pace with improvements in the industry, it has, in fact, set the pace! Brunner cooperates with case and cabinet manufacturers enabling them to adopt many modern improvements in design and utility of modern cases and cabinets.

Whether you are now prepared to place an order or are contemplating a post-war purchase of a refrigerated show case or cabinet, remember that its efficiency, reliability and economy depend upon its refrigeration condensing unit. Specify Brunner Condensing Units and be sure of a cabinet or case that will give you many years of reliable and economical operation.



Good personal relations were maintained with the grocer by the frozen food personnel and he later admitted that, since the advent of the new store, he had sold much more frozen food than he ever had before. To make the story complete, the grocer subsequently bought from the distributor a 27-cu. ft. freezer for his own store.

The above described operation appears to be one method of handling what is destined to be a definite trend in our marketing and living conditions. A recent survey, according to *Today's Business*, conducted among approximately 14,000 food stores in a large city, showed that even now one third sell frozen foods and a great many more plan to sell them as soon as they become available.

The survey also showed that fully one-half of the grocery stores sell frozen foods, nearly one-fourth of the meat markets, one-fifth of the delicatessen shops, an eighth of the fruit and vegetable stores, and smaller percentages of other types of food stores.

B.W. Alvey Now on Frigidaire's Staff

DAYTON, Ohio—B. W. Alvey has been appointed range and water heater specialist for the Frigidaire division of General Motors Corp. here, according to an announcement by H. M. Kelley, appliance sales manager.

Mr. Alvey comes to Frigidaire from the position of production service specialist for WPB in Cincinnati. Prior to that he was the resident production specialist for the army-navy electrical production agency in that city.

Since he began his business career as manager of Alvey's General Store in Winnebago, Minn., he has held such positions as: sales supervisor and divisional merchandise manager for the Northern States Power Co., Minneapolis, Minn.; assistant divisional manager and district representative for the Edison General Electric Appliance Co., Chicago; and assistant sales manager for Basca Mfg. Co., Indianapolis, Ind.

**THIS NEW BEN-HUR
FARM and HOME
FREEZER BELONGS
IN ALL YOUR
Customers' Modern
Home Planning**



TODAY, in communities all over America, dealers are placing advance orders with BEN-HUR Distributors for the new Ben-Hur Farm and Home Freezer. They know that many of the 900,000 annual new home builders, will specify in their plans the health-preserving, budget-saving advantage of home food freezing. Each of these forward-looking dealers is preparing to benefit, profit-wise, by this nation-wide sales opportunity.

The engineering "know-how" and skilled craftsmanship acquired during more than 33 years of producing quality products will be built into each of these amazingly efficient BEN-HUR Farm and Home Freezers. All of the advanced performance features developed by BEN-HUR engineers — plus all that is best in cabinet design, construction, and styling — will characterize the BEN-HUR Line. Every unit soundly, durably built — properly, lastingly insulated — laboratory-tested under all service conditions . . . A complete range of sizes for every family need, city or rural.

Your Profits and your CUSTOMER-PRESTIGE will increase with every Ben-Hur Farm and Home Freezer you sell. Write us at once about the Ben-Hur Dealerships still available.

BEN-HUR MFG. CO.

324 East Keefe Avenue • Milwaukee 12, Wisconsin

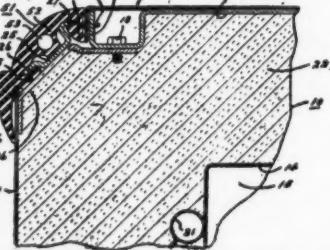
Continuous Manufacturing Since 1911

BEN-HUR **FARM & HOME FREEZERS**

PATENTS

Weeks of Aug. 21 & 28

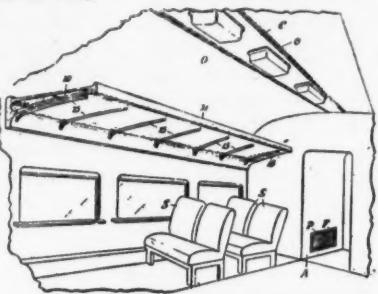
2,383,354. REFRIGERATING APPARATUS. Wilford H. Teeter, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Oct. 29, 1943, Serial No. 508,141. 8 Claims. (Cl. 220-71.)



1. A refrigerating cabinet having a bottom wall, a top wall, and an upright wall structure forming a food storage chamber within said cabinet, means in said cabinet top wall providing an access opening for said chamber, movable means normally closing said chamber access opening, a sheet member disposed over said cabinet top wall, a sheet member disposed over said cabinet upright wall structure, the juncture of said top wall with said upright wall structure providing an exposed corner extending horizontally around the top of said cabinet, said first and said second named sheet members having their edges at said corner terminating short thereof and in spaced apart relation to one another, and a non-metallic resilient element interposed between, and concealing the spaced apart edges of said members and being secured to said cabinet to form the exterior wall of said corner.

2,383,423. AIR PURIFYING AND CONDITIONING SYSTEM. Carlton K. Steins, Merion, Pa., assignor to The Pennsylvania Railroad Co., Philadelphia, Pa., a corporation of Pennsylvania. Application

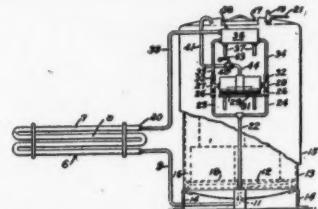
Aug. 27, 1943, Serial No. 500,220. 9 Claims. (Cl. 98-10.)



1. An air purifying and conditioning system for railway passenger cars and the like having seats serially arranged along one of its side walls, comprising a refrigerating compartment at one end of the car; an air flow duct with lateral discharge openings at the ceiling of the car, connecting into the refrigerating compartment; an air return inlet into the refrigerating compartment adjacent the car floor; blower means within the refrigerating compartment for causing circulation of the air between said compartment and the passenger space in the car; a continuous hollow longitudinal shelf-like projection extending inwardly from the side wall of the car with inlet apertures in its bottom, directly over the seats, and constituting an auxiliary air return duct which communicates with the suction side of the blower means in the refrigerating compartment; and filter means at the delivery end of the return duct for removing smoke and fumes from the air before it is released into the refrigerating compartment for recirculation in the car.

2,383,466. REFRIGERATION MECHANISM. Buolf A. Isenberg and Richard S. Pershing, Los Altos, and Clarence Van Houden King, Jr., Edward D. Patton, and Robert Caraway, San Francisco, Calif., assignors to Perishables Shipping Equipment Co., a corporation of Nevada. Application Feb. 8, 1939, Serial No. 255,244. 12 Claims. (Cl. 62-91.5.)

1. A refrigeration mechanism comprising a closed heat-exchange circuit including heat absorbing coils, a heat releasing coil, and a pump for circulating a heat exchanging fluid through said circuit, and a closed



container for a sublimating refrigerant in thermal relationship with said heat releasing coil, said pump being operated solely with sublimated gas from said refrigerant.

AVAILABLE FOR LICENSING OR SALE

Pat. 2,024,612. REFRIGERATOR. Patented Dec. 17, 1935. A method of loosening ice cube trays and ice cubes in the trays to permit easy removal. Consists of applying heat either by permanently built-in units or a temporary attachment. Several embodiments shown. (Owner) Dr. Nathan Sulzberger, 128 Central Park South, New York 19, N. Y. Groups 35-84; 36-21. Reg. No. 226.

Weeks of Sept. 4 & 11

2,384,210. REFRIGERATION UNIT. James J. Sunday, Detroit, Mich. Application Dec. 8, 1941, Serial No. 422,089. 2 Claims. (Cl. 62-115.)

1. In a refrigerating system comprising a compressor 9, a condenser 10, an evaporator 13, a line 14, connecting the high side of the compressor with the condenser, a line 15, 16, 17 connecting the condenser with the evaporator, a suction line 18 connecting the evaporator with the low side of the compressor, a first solenoid operated by-pass valve 24 connected into the line 14 between the high side of the compressor and the condenser, a by-pass line 31 forming a connection between the above said by-pass valve 24 and the said line 15, 16, 17 between the condenser and the evaporator, an expansion valve 19 in the second mentioned line 15, 16, 17 positioned between the evaporator and the point at which the above said by-pass line 31 connects into the line 15, 16, 17 between the condenser and evaporator, a

(Concluded on next page, Col. 2)

CLASSIFIED ADVERTISING

POSITIONS WANTED

AVAILABLE SEPTEMBER 15, 1945. An experienced refrigeration, air conditioning, and heating service engineer with a successful record of profitable retail service department operation. Prefer connection with an organization where the "know how" of 18 years in this field can be exercised. References available. Box 1810, Air Conditioning & Refrigeration News.

BRANCH MANAGER of refrigeration, etc. wholesale supply jobber for approximately four years, plus six months manufacturing branch parts depot. 38 years old, progressive, fair personality, and good references. Prefer similar position or one as representative in midwestern territory with a reliable, well-established company. Box 1821, Air Conditioning & Refrigeration News.

FIRST CLASS commercial refrigeration service man. Installation and Service. Some air conditioning. Wants permanent position; prefer midwest or west coast. References. 12 years experience. 37 years old. Married. State salary and set-up. Available immediately. Box 1819, Air Conditioning & Refrigeration News.

ENGINEER, graduate, 10 years engineering and design experience of commercial, industrial, marine applications of air conditioning, refrigeration, ventilation. Desires engineering and sales work. Box 1820, Air Conditioning & Refrigeration News.

MANUFACTURER or Distributor. Do you need man thoroughly versed in sales and distribution commercial refrigeration? College trained with practical experience as salesman, supervisor, and salesman; covering sales promotion, hiring, training, and direction of salesmen; also display and store equipment field. Permanent connection only with progressive organization. Box 1823, Air Conditioning & Refrigeration News.

EXPERIENCED COMMERCIAL service and installation engineer desires position with south central or southeastern company. Ten years experience. Commercial estimating. Some drawing. Forty-five years of age. Married. Box 1824, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

APPLICATION ENGINEER: familiar with technical and practical applications of heat transfer equipment wanted by refrigeration and air conditioning manufacturer located in Michigan. Please advise background and qualifications. Box 1793, Air Conditioning & Refrigeration News.

COMMERCIAL application and service engineers. Large refrigeration firm with growing export business has openings in several territories for qualified refrigeration application and service engineers. Knowledge of foreign languages helpful. Write giving full details experience and references. Box 1797, Air Conditioning & Refrigeration News.

DESIGNING ENGINEER on commercial refrigeration, coolers, display cases and specialty production, capable of designing, engineering, and handling complete factory operation of small plant over 50 years in business. Location, Central U. S. Offering fine opportunity to qualifying party. Give past experience, references, and wages desired. Write Box 1800, Air Conditioning & Refrigeration News.

OHIO MANUFACTURER needs Assistant Sales Manager for nationally sold packaged refrigeration product. Excellent postwar volume assured. Position will require some travelling. No reconversion problem. Give full information first letter. Confidential Box 1806, Air Conditioning & Refrigeration News.

SERVICE MEN—Chicago—\$1.85 per hour plus \$25 per hour car allowance. Steady employment with large, long established refrigeration and air conditioning installation and service organization. Advancement opportunities in expansion program. Consideration given only to thoroughly experienced, competent men. Give full details in your letter. Box 1808, Air Conditioning & Refrigeration News.

MANAGER for our installation and service department, refrigeration, air conditioning, and heating. Headquarters Jacksonville, Fla. State age, salary desired, qualifications, and references first letter. Box 1809, Air Conditioning & Refrigeration News.

SALES MANAGER; commercial fixture, refrigeration, to employ and train salesmen. Also handle branch office and understand Butcher Tool Supplies. Must have proven record. To qualifying party can offer attractive position handling office and Iowa territory well known firm. Give qualifications, age, past employ. Strictly confidential. Box 1815, Air Conditioning & Refrigeration News.

REFRIGERATION PRODUCTION Manager and Engineer to take charge of growing commercial refrigerator plant in Cleveland. Must be fully capable. Good salary and bonus. State qualifications. Box 1817, Air Conditioning & Refrigeration News.

LABORATORY test & project engineers. Openings for several refrigeration laboratory test and project engineers interested in permanent position with well established refrigerator manufacturer. Should have sufficient experience to carry a development or research project to completion. Mechanical or Electrical Engineering graduates preferred. Give education, experience, references. Box 1818, Air Conditioning & Refrigeration News.

DISTRICT MANAGERS. Well established Midwestern condensing unit manufacturer has openings East Coast and Middle West for district managers, salary and expense basis. In answering include photograph, complete experience data, and approxi-

mate income expected. Replies handled in strict confidence. Our organization knows of this advertisement. Box 1822, Air Conditioning & Refrigeration News.

DRAFTSMAN and engineer for heating, ventilation, and air conditioning. KROESCHELL ENGINEERING CO., 211 W. Ontario St., Chicago.

AA-1 REFRIGERATION service men permanent positions with established distributor General Electric commercial refrigeration and air conditioning. Thoroughly trained, proven record. To "above average" service man, highest salary, opportunity advancement, paid vacation, ideal working conditions. Write qualifications, references, salary desired. MARTIN-JOHNSON ENGINEERING COMPANY, 4209 Oak Lawn Avenue, Dallas, Texas.

COMPRESSOR REBUILDER and General Shop repairman. Good wages and pleasant working conditions. Steady job with good future in expanding organization. Give complete details of experience in letter. REFRIGERATION MAINTENANCE CORP., 4473 Cass Ave., Detroit 1, Mich.

SALES ENGINEER for York Distributor in Detroit. Experienced in Commercial Refrigeration and Air Conditioning. Estimating, layout, and selling. Excellent salary and commission set-up. Give complete details in letter and enclose small photo. TALBERT-THOMAS CO., 4472 Cass Ave., Detroit 1, Mich.

SAN DIEGO, California. Wright Refrigeration Service requires first class servicemen at \$1.25 per hour with time and half over 40 hours per week. Steady work, lots of overtime, and the best climate in America. WRIGHT REFRIGERATION SERVICE, 1327 India St., San Diego, Calif.

REFRIGERATION COUNTERMAN for one of Chicago's leading refrigeration supply jobbers. Excellent opportunity. Experience necessary. CHASE REFRIGERATION SUPPLY CO., 546-48 W. 119th St., Chicago 23, Ill.

SALES ENGINEER: Export Department of one of the midwest's largest manufacturers of home appliances and commercial refrigeration equipment needs man experienced in both domestic and commercial refrigeration. Must be able handle all service correspondence and commercial applications. Immediate opportunity. Give full details and enclose photograph Box 1825, Air Conditioning & Refrigeration News.

AIR CONDITIONING engineer who can estimate, layout, supervise installation of unit and central plant systems. Excellent salary. Company in business many years well financed, with reputation for reliability. Write full details, references, salary expected, date available to Charles H. St. John, Vice President, GRIFFITH-CONSUMERS CO., 1413 New York Ave., N. W., Washington 5, D. C.

TAMPA, FLORIDA: Fixture house and McCray representative, established 25 years, has opening for experienced commercial refrigeration service man. Settled, married, with family preferred. Living costs lower than in north. Good opportunity right man. Salary basis guaranteed with profit sharing. Write particular experience, and references. JOHNSTON FIXTURE CO., P. O. Box 98, Tampa, Fla.

FRANCHISES WANTED

ATTENTION: MANUFACTURERS. Export can be a great part of your business. We offer to sell and promote your goods in world markets on a simple, domestic business basis. At our expense we will introduce and sell your goods. It is to your interest to consider our offer. Write immediately E.S.T., EXPORT DIVISION, 26 Beaver St., New York 4, N. Y.

FRANCHISES AVAILABLE

WANTED: Eastern seaboard dealers. O.P.A. approved prices; 2 cu. ft. chest type freezer \$236. 6 cu. ft. chest type freezer \$260. Famous Pinocchio Junior manufactured solely for us by Revco. Inquire about the Pinocchio and Crisco types. Attractive discounts. COMPLETE REFRIGERATOR SUPPLY, 92 Seventh Ave., New York. Chelsea 2-4245.

EQUIPMENT WANTED

WANTED: New condensing units of all makes. Sizes 1/4 hp. to 1 hp. Any quantity. Also blower fans and fan motors. Will also purchase quantities of frozen food cabinets, beverage coolers, and water coolers. FEDERAL APPLIANCE SERVICE, 1250 Riverbed Ave., Cleveland, Ohio. Cherry 8170.

EQUIPMENT FOR SALE

FOR SALE: Reasonable. 1,000 lb. Victor Ice Maker, electric frozen foods display boards and used coils. ALL-REFRIGERATED FIXTURES, INC., 437 Broadway, Buffalo, N. Y.

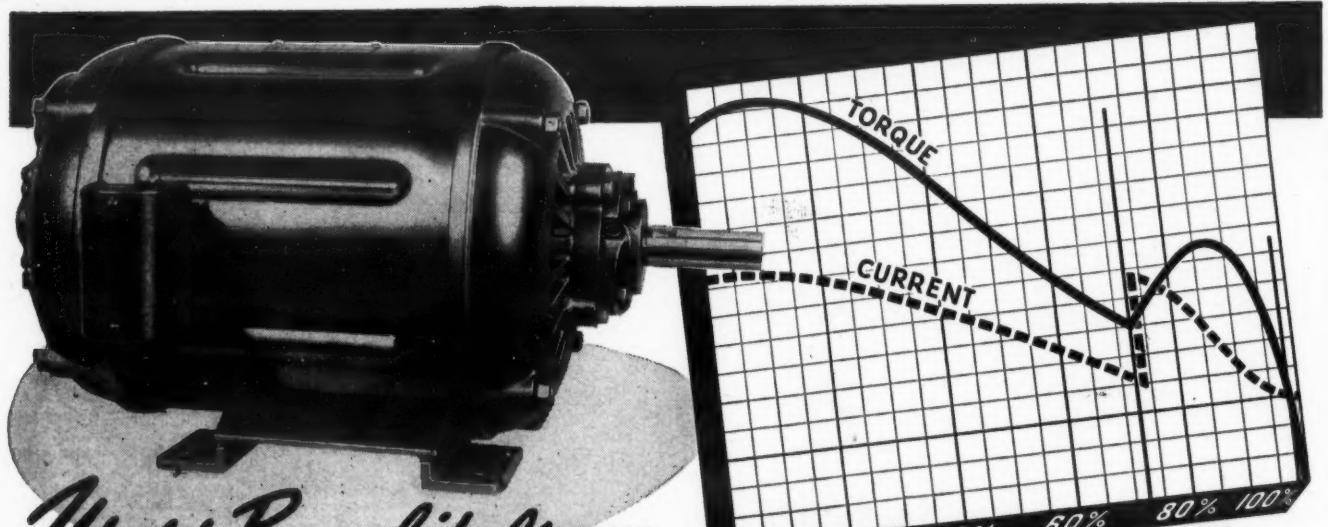
AVAILABLE IMMEDIATELY. Buy now famous Pinocchio Freezer plates, copper tubed, insured against corrosion, sizes 1, 2, 3, 4, 5, and 6 ft. by 18 inches. Standard sizes in stock. Others special. Net \$ per sq. ft. 50% with order, 50% on delivery. No waiting! COMPLETE REFRIGERATOR SUPPLY, 92 Seventh Ave., New York. Chelsea 2-4245.

FOR SALE. Remanufactured air and water-cooled condensing units 1/4 hp. up to 1/2 hp. Frosted food and ice cream cabinets. EDISON COOLING CORP., 310 East 149th St., New York 51, N. Y.

ICE MAKERS: Six Victor seven-tray ice cube cabinets, new, copper coils; sizes 18 inches wide, 23 inches deep, 34 inches high. \$100 each F.O.B. Trenton. EVER-READY REFRIGERATION CO., 218-23 N. Broad St., Trenton 8, N. J.

"CENTRAZ" VAPOR-SEAL. A waterproof adhesive that adheres to metal, wood, cement, plaster, etc. For lining

(Concluded on next page)



Users Benefit from the Long Life, Economy, and Dependability built into Wagner Type RA Motors...

Wagner type RA (repulsion-start induction) motors give years of reliable, trouble-free service, because dependability is built into every motor.

Careful engineering has reduced wear, vibration and noise of operation to a minimum. Many important construction features such as sturdy welded steel stators and well-insulated windings securely held in place, add to the ruggedness of the motors without sacrificing compactness or efficiency.

Wagner type RA motors embody all the important improvements in single-phase motor design. This means that the user of RA motors

gets the best motors for the job with long life and dependability built into every part.

Wagner type RA motors are truly "general purpose" motors because their applications are many. They are particularly suitable for driving machines with high inertia, machines involving excessive friction in starting, and, in general, loads requiring motors capable of exerting high starting-torque with relatively low starting-current.

RA motors are available in 1/8 to 15 hp; sleeve or ball-bearing; horizontal or vertical; open, dripproof, and totally enclosed; rigid, resilient, or flange mountings.

Wagner has 29 Sales and Service Branches ready to serve You

ATLANTA 3 • BALTIMORE 18 • BOSTON 15 • BUFFALO 8 • CHICAGO 16 • CINCINNATI 10 • CLEVELAND 15 • DALLAS 1 • DENVER 2 • HOUSTON 2 • INDIANAPOLIS 4 • KANSAS CITY 8 • LOS ANGELES 15 • MEMPHIS 3 • MILWAUKEE 2 • MINNEAPOLIS 4 • NEW YORK 7 • OMAHA 2 • PHILADELPHIA 8 • PITTSBURGH 13 • PORTLAND 9 • ST. LOUIS 3 • SALT LAKE CITY 1 • SAN FRANCISCO 3 • SEATTLE 4 • SYRACUSE 2 • TULSA 3 • WASHINGTON, D. C. 5

M45-23

Wagner Electric Corporation

ESTABLISHED 1891

6441 Plymouth Avenue, St. Louis 14, Mo., U. S. A.

In Canada: Wagner Electric at Leaside, Ontario

ELECTRICAL AND AUTOMOTIVE PRODUCTS

MOTORS
are but one of several
WAGNER PRODUCTS
serving industry.
Other WAGNER PRODUCTS:
AIR BRAKES
BRAKE LINING
HYDRAULIC BRAKES
INDUSTRIAL BRAKES
INDUSTRIAL
BRAKE CONTROLS
Norol
TACHOGRAPH
(Recording Speedometer)
TRANSFORMERS



CLASSIFIED ADVERTISING

(Concluded from preceding page)
frozen food and ice cream cabinets, milk and water coolers, walk-in boxes and all refrigeration applications requiring vapor control. Wall applications can be painted. CHRISTIE CO., 1530 Olive St., St. Louis 8, Mo.

IMMEDIATE DELIVERY Beverage Coolers, 6 and 8 feet, without units. Freezers complete with units or without units. Large supply blower coils. Write, wire, or phone GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y. Stayversant 9-1222.

MANIFOLDS with valves—Manufactured by Mueller Brass Co. Forged brass type manifolds with 2-3-4-5 and 6 valves, and 1/2" flare. Diaphragm or Bellows type, all brand new, sacrifice. Write to HYGRADE SODA FOUNTAIN MFG. CORP., 472 Sackman St., Brooklyn 12, N. Y.

DRY BEVERAGE coolers, 6 ft., 8 ft., 10 ft. Farm freezers, all sizes. Water coolers, reach-ins, compressors. All brand new. No priority. Immediate delivery. Surplus blower coils, new, American. H. C. 168. \$135. 15" T.D. 23,000 B.T.U. GORDON REFRIGERATOR CO., 235 Broad St., Philadelphia 7, Pa. phone Rittenhouse 6339.

QUALITY dry beverage coolers, 75 inches long, 28 inches deep, 39 inches high, sliding doors. Freezers, stainless steel front, sides and top. Beer pumps, blowers, stainless steel beer coolers, tavern work benches. Office and cafeteria water coolers. MAJESTIC REFRIGERATOR CORP., 625 Broadway, New York 12, N. Y.

FOR SALE: Miscellaneous group of 372 galvanized steel coils including gravity coils for coolers and blower cores for panel-type blower coils at a fraction of their original cost. Will sell entire lot or any part thereof. For details write McCRAY REFRIGERATOR CO., Kendallville, Ind.

HOME, FARM freezers. New. Limited supply available. All steel construction, finished in white Duxo and stainless steel tops for use in Quick-Freeze and Storage. WILSON INDUSTRIES, 3533 Holland Ave., New York City 67. OL 5-6906.

FOR SALE: Dew Freeze frozen food cabinets, all white enamel. Streamlined. 5 cu. ft. Complete \$377. Less unit \$290. October delivery. DEW FREEZE CO., 551 Washington, St. Louis, Mo., Jef. 0105.

BUSINESS OPPORTUNITIES
WEST PALM Beach, Florida: A going refrigeration business that will pay its investment back in two years, will sell at inventory plus \$2,000 good will. Four experienced service men. Plenty of merchandise on the floor, plenty of business, no accounts payable. Owner retiring. Write J. B. VENTERS, 505 Revere Rd.

HUBBELL
YODER
REFRIGERATION PLATES

THE HUBBELL EVAPORATOR PLATE
Every square inch of surface is prime heat pick-up. For Frozen Food Lockers, Freezer Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc. Write for complete information. It will pay you.

ENGINEERING SERVICE INC.
820 Standard Building • Cleveland, Ohio
Sole Agents for
THE YODER COMPANY, Fabricating Division
MANUFACTURERS

SALESMANAGER

Commercial refrigeration and air conditioning field. Age 30 to 45, with proven record. Experience in the handling of wholesale accounts and supervision of dealers desirable.

Excellent future. Detroit branch office one of largest refrigeration manufacturers. Apply by letter with photograph stating qualifications, past earnings, salary expected, etc. Box 1827, Air Conditioning & Refrigeration News.

WANTED!!!

Shop foreman and engineer with knowledge of production on reach-in boxes, meat and delicatessen cases, walk-in boxes, etc. Must be experienced and capable of taking charge of complete cabinet factory.

ELSTER'S

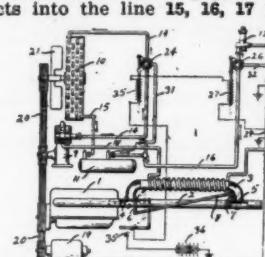
115 S. Los Angeles St.
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filled drinking water... 24 hours a day
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users in electric
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Columbus 8, Ohio

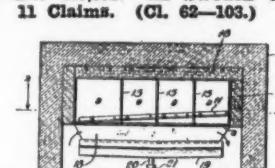
Patents (Con't)

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second solenoid operated by-pass valve 26 in the line 15, 16, 17 running between the condenser and evaporator and positioned between said expansion valve 12 and the point at which said by-pass line 31 connects into the line 15, 16, 17 running between



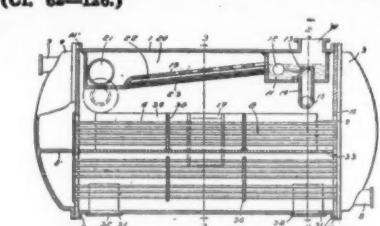
between the condenser and the evaporator, a by-pass line 32 about said expansion valve 12, the second mentioned by-pass line 32 connecting the second mentioned solenoid operated valve 26 with the part of the second mentioned line 15, 16, 17 extending from said expansion valve 12 to the evaporator 13; an internal combustion engine for operating said compressor, an exhaust line 3 for said engine constituting a source of heat, said exhaust line being in heat exchange relation with said line 18 connecting the evaporator with the low side of the compressor, a valve 4 for said exhaust line, said exhaust line valve 4 when closed preventing the exhaust gases from flowing through said exhaust line and when open permitting the exhaust gases to flow through said exhaust line 3, and means for coincidentally operating said solenoid bypass valves 24, 26 to open them into their respective by-pass lines 31, 32 and for opening said exhaust line valve 4, whereby the refrigerant may by-pass the condenser 10 and the said expansion valve 12 in the line 15, 16, 17 running between the condenser and evaporator and whereby the exhaust gases may flow through the exhaust line 3 and the refrigeration system may be quickly defrosted.

2,384,313. EVAPORATOR FOR ABSORPTION REFRIGERATING APPARATUS. Peter Rudolf Max Moritz Kohler, Stockholm, Sweden. Application June 17, 1942, Serial No. 447,355. In Sweden June 17, 1941. 11 Claims. (CL 62-103.)



1. A refrigerator having a thermally insulated storage space, an absorption refrigeration system including an evaporator in which refrigerant fluid and auxiliary agent flow in the presence of each other, partitions forming a plurality of separate heat conducting compartments immediately beneath the ceiling of said storage space, said compartments having openings at the front and arranged in contiguous side by side relationship from one lateral side to the opposite lateral side of said storage space, closure means for the compartment openings, said evaporator having a plurality of sections with successive sections arranged in adjacent compartments to effect cooling of said compartments, said refrigerant fluid evaporating in the auxiliary agent at progressively increasing temperatures in the adjacent compartments from one lateral side to the opposite lateral side of the storage space.

2,384,413. COOLER OR EVAPORATOR. Joseph R. Zwickl, East Orange, N. J., assignor to Worthington Pump & Machinery Corp., Harrison, N. J., a corporation of Delaware. Application Nov. 18, 1943, Serial No. 510,745. 10 Claims. (CL 62-126.)



1. In an evaporator, a shell, a plurality of tubes extending through said shell, means for delivering a coolant into said shell for submerging said tubes, said tubes arranged in a plurality of sets, means whereby a vaporization surface of the coolant and vapor escape space will be provided above each set of tubes, and means whereby a predetermined level of liquid coolant will be maintained in one set of said tubes before liquid coolant is allowed to flow to the other sets of tubes.

Anderson Takes Post With Gamble-Skogme

MINNEAPOLIS—The appointment of George D. Anderson to assistant merchandise manager of the hard lines division of Gamble-Skogme, Inc., operating Gamble Stores, and the promotion of Arthur G. Johnson to manager of the automotive, hardware, housewares, sporting goods, and building materials department of the division, was recently announced by the company. The hard lines division also includes appliances, radio, farm supplies, and furniture.

Mr. Anderson, formerly department head of the division to be operated by Mr. Johnson, has been with the company since 1926. Mr. Johnson, prior to his connection with Gamble-Skogme, had been associated with the parts division of Dodge.

New Connecticut Valley A.S.R.E. Section Hears Talks on Various Phases of Frozen Food Industry

SPRINGFIELD, Conn.—First fall meeting of the Connecticut Valley Section of A.S.R.E., which was held Sept. 20 at the Hotel Sheraton here, featured four talks on the various phases of the home freezer, following an entire dinner composed of frozen foods presented by the "Save-On-Foods System," North American Foods, Inc., of Boston.

Speakers were: E. C. Tanner, Westinghouse Engineering Department, who discussed "Product Development"; Mrs. Julia Keine, director of Westinghouse home economics, whose topic was "Use Development"; H. F. Hildreth, Westinghouse commercial refrigeration department sales manager, who discussed "Sales Development"; and Gardner Cole, North American Foods, Inc., who talked on the commercial preparation of frozen food.

"The woes of a product or design engineer are many, when attempting to satisfy most of the future owners of home freezers," said Mr. Tanner. "The fact that \$100 worth of food might be stored in a home freezer cabinet requires intense design thought on all possible users and eventualities," stated Mr. Tanner.

He went on to present all trials and shortcomings in the earlier stages of home freezer design, and how and why they were superseded. With a hermetic-sealed unit, the evaporator, together with the unit and the connecting lines may be removed for service without removing the stored food, Mr. Tanner concluded.

Research problems from the point of view of the food itself were presented by Mrs. Keine. Her talk depicted the many tests on all food and under many variations of cooking, blanching, and wrapping which had to be made before simplified instructions in the preparation of foods could be issued to prospective owners of home freezers.

"The subject of wrapping materials is a most important one, since many types have been proposed. A paper box, coated on the inside, with cellophane on the outside, and sealed with a hot iron was found to be very satisfactory," Mrs. Keine said.

Fourth on the docket of speakers was Mr. Cole with a talk on the "Save-on-Foods System," and how it operates. He disclosed that large quantities of food can be delivered in a truck at 0°, and that 75 to 80 different foods are now available in the frozen state.

"North American Foods, Inc., like other future firms, will send by express, frozen food packed in dry ice to many parts of the country. Such a system now operates in Boston and Springfield, and similar outlets will be located in Hartford, Providence, and Worcester," concluded Mr. Cole.

Next meeting of the Connecticut Valley Section is scheduled for Oct. 8 at the Hartford City Club, Hartford. It will be a combined meeting with the American Welding Society, at which A. K. Phillipi of Westinghouse will speak on "Furnace Brazing and Induction Heating."

Trescott Is REA Contact For Westinghouse

ST. LOUIS—J. B. Trescott was recently appointed Rural Electrification Authority representative to the Westinghouse Electric Supply Co. headquarters here according to David M. Salsbury, vice president and general manager of WESCO.

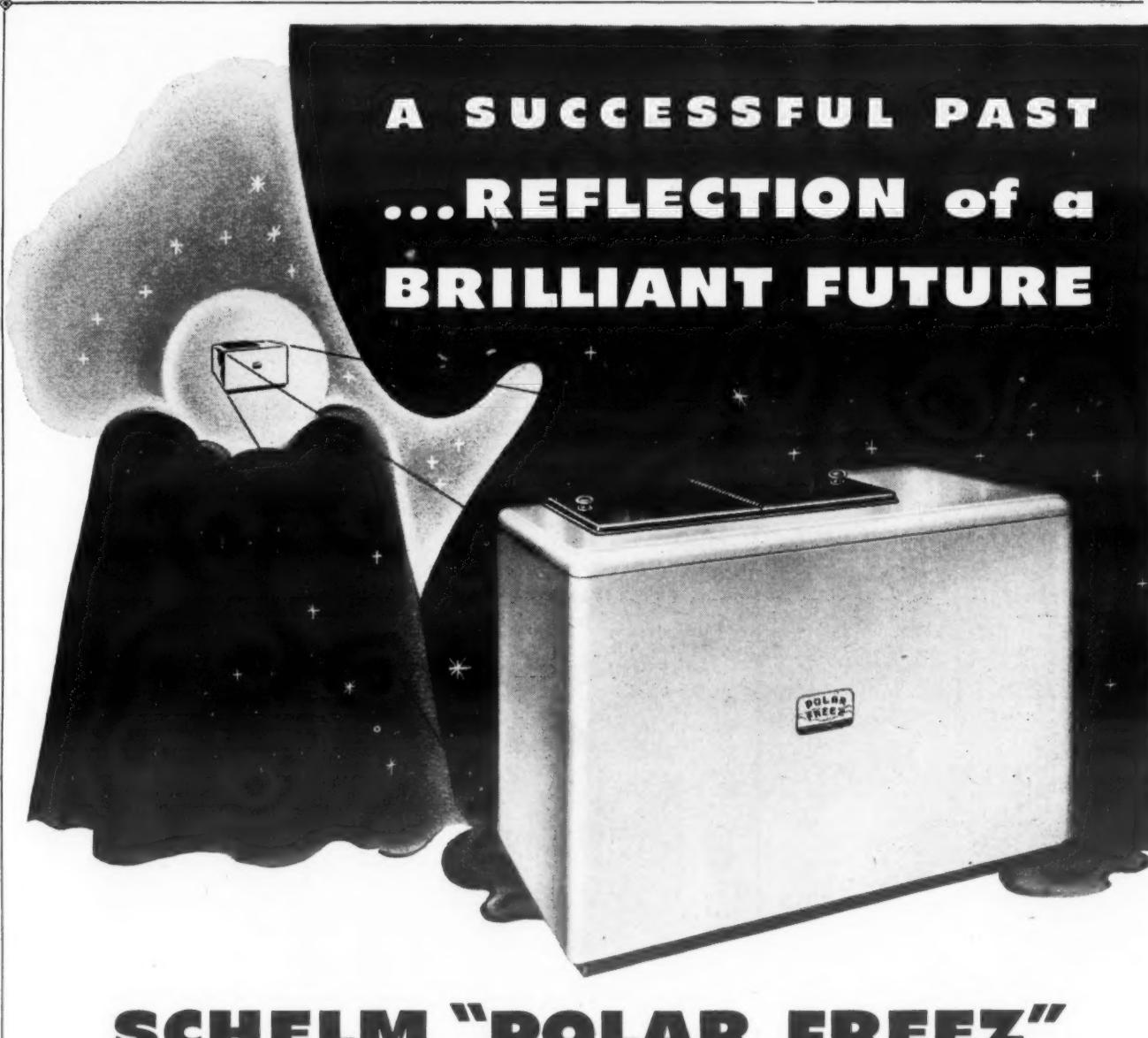
Mr. Trescott will be in charge of negotiation of contracts with the REA, leaving his position as Midwest district apparatus and supply manager. On administrative matters he will report to W. B. Meek, district manager at St. Louis, and on sales matters to M. P. Nickerson, general apparatus and supply manager at headquarters office in New York.

Born in Vicksburg, Miss., most of Mr. Trescott's life has been spent in the electrical industry which has taken him to Mexico, Canada, and Cuba at various times.

Gardner Sales Manager For A. M. Byers Co.

PITTSBURGH—Robert H. Gardner has been appointed general manager of sales of A. M. Byers Co. here. Mr. Gardner has been manager of Byers' Washington office since 1933, except for a four-year period ending in 1940 during which he was manager of the company's steel pipe sales, with headquarters in Pittsburgh.

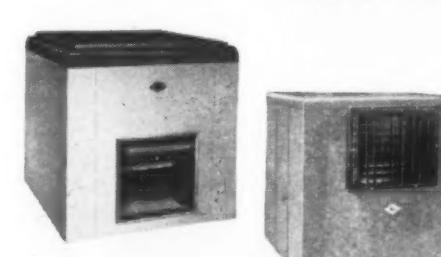
At the same time, the appointment of H. R. Rowland as assistant general manager of sales was announced. Mr. Rowland joined the company's sales department in 1915.



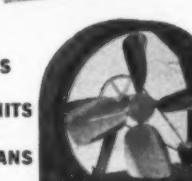
SCHELM "POLAR FREEZ"

Farsighted appliance dealers everywhere are now looking to the manufacturing experience of Schelm Brothers, Inc. to lead the parade in conditioning and freezing equipment for home and commercial use... to establish an even more enviable record than ever before on the famous Hall line of quality air conditioning units, low-temperature cabinets, furnace blowers and attic fans.

Prompt deliveries are now being made to dealers on these sure-fire profit-making appliances. Write today for complete information on Schelm, a name to watch and remember in the conditioning and freezing field!



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